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Management of Large Undertakings

DURING recent years the increasing size and scope of industrial undertakings has given rise to a number of problems which concern management and staff relations. There are potential problems arising from the increasing magnitude of the industrial unit which have to be borne in mind, as well as current needs. The transport industry, arising directly from the grouping of the various undertakings in the country, requires to be considered with an eye to the future. There is every likelihood that ultimately the need will arise for the transport officer rather than the railway or road haulage officers, for example, but that will be a normal development of the present position, as the railways in this country are likely always to account for about 80 per cent. of internal public transport under the control of the British Transport Commission. Whatever the nature of industrial ownership, the basic problems of management remain the same, and, therefore, the subject should be approached on a non-party basis. This point was emphasised by Mr. R. A. Butler in his address to the British Institute of Management as its autumn conference last week. Attempts are being made, he said, to consider this vital matter of control with as little prejudice as possible. Mr. Butler then considered the question of how managers are to be recruited and attached much importance to facilities being provided for continuous education between the ages of 15 and 18 years. Potential managers should not be left to learn their jobs by experience. Organisation of management in relation to the requirements of Government was another subject discussed at the conference, and one speaker suggested that, as Government intervention in industry is here to stay, large undertakings should establish a Government Relations Department which would co-ordinate the various technical interests so that they spoke with one voice. Its primary function would be to interpret the firm to the Government. The important contribution of such a department would not be in form filling—normally done by the technical department concerned—but in examining the necessity for the forms and endeavouring, wherever possible, to have them abolished or simplified.

Importance of Staff Discussions

MANAGEMENT today must be a matter of teamwork led by men of vision backed by the resources of research and inspired by a desire to work for the common good of all engaged in industry. This is brought out by Mr. John Elliot, Chief Regional Officer, London Midland Region, writing in the last issue of the *British Transport Review*, wherein he stresses the importance of staff discussions as a means of solving day-to-day problems. This is a subject on which Mr. Elliot is well qualified to write. Very soon after British Railways came into existence in 1948, Mr. Elliot, then Chief Regional Officer, Southern Region, made an experiment by holding a meeting in London between all grades of employees of the Region and his Chief Officers. This proved so successful that similar meetings were soon arranged in other centres. Some problems and grievances cannot be solved quickly, but, once the staff know the facts of the case from the management side as well as their own, and are willing to believe that a grievance will be put right as soon as it can be, then a big step forward in labour relations has been made. According to Mr. Elliot, a refusal by both sides to play "politics" and complete honesty of purpose are essential to success.

London Transport as an Advertising Medium

UNDER the title of "London's Travelling Public" the British Transport Commission has produced an admirable travel survey of London, for the use of advertisers and their agents, based on the London Transport Travel Survey of 1949. It is an analysis in book form of the travelling Londoner, showing what type of transport he uses, why, how far, and by what route he travels, what he does *en route*, whether he owns a car, and so forth. The reader is thus presented with a complete portrait of the Londoner in transit, enabling him to decide what service of London Transport is the best medium to advertise his product. The information is attractively presented in colour, aided by sketches, and is bound in a striking cover. It is claimed to be the first comprehensive survey of transport advertising in this country and meets a reiterated demand. It will be followed by surveys of other parts of the country where B.T.C. services have a monopoly. The B.T.C. is preparing to establish in London an organisation to provide advertising information rooms and help advertisers to plan campaigns.

British Railways Staff Training

AFTER reviewing the educational arrangements in operation on British Railways since nationalisation the Railway Executive has decided to specialise to some extent in certain subjects at its various residential schools. This will result in the two schools at Darlington being combined under one principal and used largely for training teachers. The inaugural classes now in session there will form a nucleus of fully trained teachers capable of instructing other members of the staff in the technique of teaching. Eighteen railwaymen, each a specialist in his own particular branch of work, are now being coached in this way. The object is to build up a teaching staff which will eventually be adequate for the whole of the railway staff. Training at the Derby school will include instruction for prospective or newly appointed stationmasters, assistant controllers, and permanent way supervisors, while Hadley Wood will deal with telecommunications and clerical training. Primary clerical training for new entrants will be concentrated at Scarborough and Edinburgh and at Woking

the syllabus will include miscellaneous instruction to supervisors and others. Wherever possible the programme is being developed in collaboration with local educational authorities who frequently are able to offer classes at evening institutes specially suitable for railwaymen.

East African Developments

CONSIDERABLE progress in integrating the former Kenya & Uganda and Tanganyika Railways under the East African Railways & Harbours Administration is recorded in the annual report for 1949 of the East Africa High Commission. The effective pooling of resources involves considerable expenditure, and by the end of 1949 a large part of the £23,000,000 loan authorised by the Central Legislative Assembly for transport purposes had been spent as "advances pending the raising of a loan." This loan, to which reference was made in our issue of August 19, 1949, provides for expenditure of £5,490,000 for the redemption of existing loans, £4,550,000 on Tanganyika Southern Province Port & Railway, £4,000,000 on new locomotives and rolling stock, £2,200,000 for the construction of branch lines in Tanganyika and connections between the Tanganyika and Kenya sections, £2,000,000 for realignments in Kenya, £1,900,000 for general improvements to railways, and £2,860,000 for other purposes. An outstanding problem was the formulation of a common tariff throughout the system, but by the end of the year, a preliminary examination of the situation had been made. The survey of possible connections between the Rhodesian and East African railway systems was completed and submitted to the Secretary of State for the Colonies. The earning capacity of the East African Railways was well maintained, and in Tanganyika traffic was higher with "every indication of a steady but progressive increase."

Mauritius Railway Difficulties

THE future of the Mauritius Government Railways, which have sustained a loss of over Rs. 1,400,000 in each of the last two years, is the subject of a report by Mr. A. J. F. Bunning, Adviser on Inland Transport to the Secretary of State for the Colonies, who visited the island last May. The railways have to carry the yearly sugar crop in 100 to 120 days, which states the report, they do to the satisfaction of the sugar industry. Road transport without complete reorganisation would be unable to do so. Most of the loss is in passenger services. Mr. Bunning recommends that, as from January 1, 1951, there should be a flat surcharge of ½ a rupee per ton of sugar carried, and an increase of 33⅓ per cent. on general goods freight rates. First class passenger accommodation should be abolished and an addition of 10 per cent. made to third class rates. Other recommendations are that a Transport Adviser should be appointed for a period of from three to five years and the situation re-examined in the middle of 1952. Mauritius Government Railways comprise 102½ miles—which includes four miles of double line—of standard-gauge track as well as the 9½ mile long 2 ft. 6 in. gauge Bois Chéri Light Railway.

Railway Staff Negotiating Machinery

REFERRING to the new machinery of negotiation for railway salaried and conciliation staff, plans for which are nearing completion, Mr. H. C. Lang, Assistant Chief Officer for Labour & Establishment, Southern Region, in a paper to the Southern Region Lecture & Debating Society on November 8, said the delay in reaching agreement was, in fairness to the Railways Staff Conference, largely due to reluctance on the part of the trade unions; three railway trade unions were involved and there was not always unanimity of approach to the various problems. He believed only two or three contentious points remained to be resolved and in its essentials the new scheme would bear a close relation to that of 1935. If they were to integrate transport, decisions must be reached free of prejudice, or obstinacy. Integration would cause a certain amount of hardship and through the negotiating machinery they had to ensure that burdens did not fall too heavily on any particular section. Commenting on the Chief Regional Officer's informal conferences, Mr. Lang said he regarded them as very important although extraneous to the conciliation machinery. The conferences gave the staff an opportunity to make a personal approach to the Chief Regional Officer. Experience had shown that results to the benefit of management and staff had been achieved.

Explaining British Transport

THE August-September issue of *London Transport Magazine*, includes the first article of a feature which aims at acquainting members of the London Transport staff, with the activities of the British Transport Commission and its executives. Nationalisation has meant less for London Transport than for the main line railways and the road undertakings, for the London Transport Executive inherited from its predecessor, an organisation which had been highly co-ordinated over fifteen years. In some respects the co-ordination which has been achieved in London may serve as an example for the national system. It is fitting therefore that the members of the staff of London Transport should learn how far lessons learned in London can be applied to the country as a whole. The introductory article succeeds in presenting within a small compass a clear picture of the chief aims of the British Transport Commission and the results already achieved.

Stores Organisation in the Sudan

THE Stores Department of the Sudan Railways, which is described elsewhere in this issue, is divided between Atbara, the headquarters of the railway system, where the stores headquarters and the main stores depot are situated, and Khartoum, which houses the catering and steamer stores. Both the stores headquarters and the main stores depot, formerly under one roof but now about a mile apart, are of modern construction. The former is a handsome two-storey structure of brick and reinforced concrete; the ground floor includes the machine accounting section, at present using eighteen machines. These machines will eventually handle pay sheets and general statistics of the railway. The machine accounting part of the building is air-conditioned, a desirable provision in the dust-laden atmosphere. There is a basement, comprising a muniment room and the cleaning equipment for the accounting machines. The new stores sheds, opened last year in replacement of six sheds destroyed by fire, have each three bays of north-light roof windows only, to obviate the risk of fire from direct sun rays. The depot contains ample fire-fighting equipment.

"Couchette" Sleepers in Britain

IN our September 29 issue we made a plea for third class convertible or *couchette* coaches, to run as sleepers at weekends to distant coast resorts, and on other days as ordinary corridor coaches. As far back as 1928, Lt.-Colonel P. M. Brooke-Hitching, in a letter to our contemporary, *Modern Transport*, made the complaint that, although the then new third class sleepers on British railways were designed, like the French *couchettes*, for day or night travel, passengers did not fully benefit from their convertibility. He instanced the 7.30 p.m. from Euston, on which, despite the early hour of departure, the berths were already arranged for lying down before the passenger boarded. The French second class *couchette* normally provides six seats by day and four berths by night. On the longest journeys at defined stops, clearly indicated in the timetables, the attendants arrange the *couchettes* for night occupation; the extra two day passengers must then vacate the compartment. Here, since the first "convertibles," sleeping cars have been built with fixed berths, so that the passenger by, say, the 4.5 p.m. Fort William to Kings Cross, must either seek an ordinary compartment or sit in some discomfort beneath the fixed upper berth until he retires. It was to remedy this, as well as to make sleeping cars more generally available by day, that we advocated a British *couchette*.

Standardising Block Bell Codes

THE article on head lights and block bell codes in our issue of September 8, 1950, recalls the difficulties experienced in earlier days by reason of the diversity of methods of block signalling originally introduced on the numerous separate railway systems. Unpleasant prominence was given to this by the fatal collisions in the Canonbury Tunnel on December 10, 1881, which led to the Clearing House appointing a committee to investigate the matter. The only immediate result was that all lines agreed on six consecutive beats for "obstruction danger." After much discussion a bell code, practically identical with that forming the basis of present practice was drawn up and brought into use on the lines of 15 companies on October 5, 1884. For many years, however, even down to grouping in some instances, certain lines maintained their own markedly different codes. The most important of these dissenters were the L.B.S.C.R. and L.S.W.R., especially the latter, for on that line the normally clear method of working the block had never been given up and its bell signalling was carried out in a fundamentally different manner from that met with elsewhere. Only at certain selected points, where there were no outer home signals, was this practice departed from under special instruction.

The Hotels Executive

THE Transport Act, 1947, provided for the establishment of the Hotels Executive but, unlike the Railway Executive, the Docks & Inland Waterways Executive, the Road Transport Executive, and the London Transport Executive, all of which came into being on January 1, 1948, the Hotels Executive was not established until April, and did not come into full operation until July 1 of that year. With the exception, therefore, of the Road Passenger Executive it can claim to be the youngest of the public authorities appointed to act as agents for the British Transport Commission.

Because the services it provides are subject to close scrutiny by large numbers of travellers and in themselves constitute a matter on which many believe themselves to be well-informed, it is not surprising that from time to time it has encountered criticism. The provision of food in station buffets and restaurant cars, more especially in the early days of the Executive, was a matter of grave difficulty, and the members of the Hotels Executive would be the last to claim that then, or perhaps even now, catering on the railways was all that they could wish. Nevertheless, there will be general agreement that, over the last two years, there has been a distinct improvement in the meals and catering services on British Railways.

To a certain extent the efforts of the Hotels Executive have been helped by some easement in the general food position, but it is indisputable that a great deal of ingenuity and much hard work has been put into the task entrusted to the Executive. It is an easy matter to claim that not enough has been done, or that the standard of catering on British Railways still falls short of pre-war levels. We have no reason to suppose that the Hotels Executive itself holds the opinion that all that can be done has been—indeed, the available evidence is to the contrary. It is well to remember, however, that the standard of catering everywhere in this country is far below pre-war levels, and in all the circumstances of the times it is not unreasonable to take the view that the improvement in meals on trains has been a matter for satisfaction.

Elsewhere in this issue is published an article by Lord Inman, Chairman of the Hotels Executive, in which he outlines the organisation and progress of his Executive. The width of its activities, which include not only the control of sixty-eight hotels, accommodating 1,500,000 visitors a year, and necessitating the annual provision of 7,000,000 meals, but also some 562 refreshment rooms and restaurant cars on 650 services, gives some indication of the magnitude of the task. Lord Inman instances some details, too, of the Executive's various ancillary services, such as bottling cellars, bakehouses and laundries. In all, the Hotels Executive is the largest hotel and catering organisation in the world. One point that he makes—that the cost of administration shows a decrease as compared with the cost of maintaining the catering services in pre-war days, will surprise many, even allowing for some shrinkage in the catering provided.

The last report of the British Transport Commission, which covers the year 1949, shows that working results of hotels and catering resulted in a deficit of £234,019 which compares with a credit of £455,755 for 1948. The deficit on the operation of restaurant cars arose from £83,461 in 1948 to £514,231 last year. Whereas there was a surplus of £103,568 in 1948 on hotels, last year there was a deficit of £46,978, and whereas refreshment rooms had yielded £435,598 in 1948, they brought in only £327,190 last year. In common with other catering establishments, the increasing cost of foodstuffs—the retail price index rose no less than 12 points last year—the operation of the Catering Wages Act and similar factors had a serious or adverse effect on the financial results of the Hotels Executive.

Although there can be no question that every branch of a nationalised transport undertaking should be conducted with the greatest possible economy, the wisdom may be questioned of insistence on too close an endeavour to operate catering services at a profit. So far at least as the provision of food in restaurant cars and refreshment rooms is concerned, it may well be argued that this is an amenity which the traveller has a right to expect. On a great many of the world's railway systems, catering services are run at a loss as part of the policy of the administration. On some lines in the United States we understand that the deficit on the catering services is charged against publicity.

In present conditions, when a general tightening-up of expenditure is resulting in many catering establishments, operating without the peculiar difficulties which attach to railway refreshment services, having to face a heavy fall in revenue, there seems little likelihood of the Hotels Executive being able to operate on a profitable basis. Whether it is wise from an overall point of view for restaurant-car and refreshment room catering to be divorced from the Railway Executive is a matter we have ventilated on several occasions. Be that as it may, Lord Inman's article will be read with interest not only in this country, but perhaps particularly abroad.

The Future of Transport

THAT Governmental participation in transport, both in regulation and in operation, has been due to the deficiencies of private ownership, and to the vital importance of transport to the community, is the view propounded by Mr. F. Q. den Hollander, President of the Netherlands Railways, in his paper read on November 20 to the Institute of Transport. Where a transport system requires heavy capital investment, unbridled competition results in excess of equipment and staff, both of which may be needed in other spheres of community activity.

In the Netherlands, he states, there has been a gradually accelerated increase in the volume of passenger transport, because of the increase in privately-owned vehicles (bicycles, motorcars, and so on), which are replacing public transport; the increase in private exceeds the retardation in the growth of public transport. Saturation often is thought to have occurred in private transport—and every time this turns out to be wrong. Private road vehicles of all kinds are becoming increasingly cheap, efficient, and popular. As to the resultant congestion of roads and parking space, Dutch private vehicle owners, as payers of special taxes, have pressed for major improvements. These are being effected; but the system of national highways in the Netherlands is practically a duplicate of the railway system, which explains also the drift within public passenger transport, from train to bus. In passing, he alludes to the effect of air competition on passenger traffic. In goods traffic, the Netherlands Railways have managed to retain their share (17 per cent. of tonnage and 33 per cent. of ton-k.m.) of internal goods traffic, and water transport has lost much

traffic to road transport, which latter is concentrating increasingly on short hauls. Population increases, he considers, will lead to increase in railway traffic.

Charges should be high enough to cover total expenses and increases must not interfere with the retention of the railways' share of traffic. Mr. den Hollander outlines the system of subsidiary passenger and freight undertakings, both road and water, in Holland, and emphasises the importance of analysis of traffic and revenue distribution on the railway and its subsidiaries. Analysis of expenditure shows that certain lines are losing traffic in a "dangerous downward spiral"; revenue has fallen through loss of traffic, and the financial state of the whole system has not permitted of adequate maintenance, which in turn results in deterioration of service and increased expenditure on obsolete plant. There are two remedies: (a) Operation without renewals, and, as soon as direct costs are no longer covered, suspension of all, or of passenger traffic only; (b) immediate closing for all traffic. If the Government insists on continued operation, it must bear the loss (somewhat in the same way as suggested recently by the Federation of British Industries). The measures taken in Holland since 1938 to close unprofitable lines have, he states, resulted in a very great density of passenger traffic. Even so, they have not yet attained stability as a paying concern; more passenger traffic will soon have to be transferred to the road. But construction of profitable new lines is being considered, such as the Hague-Amsterdam chord line, expected to attract traffic.

Even where a railway pays its way as a whole, the service given must excel that of other means of transport, with special attention to road feeder services. Speed, therefore, is important, or rather the smallest possible transit time for both goods and passengers, which implies frequent services and good connections at junctions and rail/road transfer points. Mr. den Hollander advocates night goods train services, at least in Holland, not only to relieve line capacity needed for passenger trains, but also to reduce the number of sidings and size of yards required. He does not, however, discuss the effect on the wages bill. Regarding the handling of peak traffic, he is not in favour of raising the capacity of the railway as a whole to deal with peak traffic at normal charges, with special charges to attract traffic during periods of surplus capacity. As much traffic as possible must be carried at normal rates, with restriction of maintenance of peak periods and all available carrying space must be filled up "with the goodwill of passengers and/senders." Where this goodwill does not exist, it is far cheaper to let such potential traffic go to other means of transport.

Railway staff are divided by Mr. den Hollander into "directly productive" and "indirectly productive": the former are mainly operating, locomotive running, and so on, and permanent way department staff, whilst the remainder are indirectly productive. The latter category he considers, in Holland, excessive in number and, through lack of experience in non-railway enterprises, tending to be conservative and restricted in outlook. Much of their work should be farmed out, which also should foster reciprocity between the railway and industry generally.

Discussing the relative investment in permanent way and fixed structures as against rolling stock, Mr. den Hollander stresses the importance of the former. In the planning of quick turnround, he mentions the part played in Holland by wide doors and automatic couplings in passenger vehicles, but draws attention to the unsuitability, for long-distance travel, of multiple-unit trains. He goes on to sketch the basis of the Netherlands Railways timetable—mainly goods trains by night, and, by day, long-distance passenger trains with multiple-unit electric and/or diesel sets interspersed. The purchase and maintenance costs of rolling stock when scrapped after 25 years becomes cheaper than half of those under the existing Dutch policy of scrapping after 50 years. Standardisation will assist the rolling-stock builders, as will the reduction, with electrification, in the types of locomotives.

After dealing with fixed structures and with the strategic aspect of railways, he concludes that there is a good future for those systems which know how to restrict themselves to their proper functions and are willing to transfer to others what can be done better by them. That future will be even better if the railways will keep themselves young, strong, and adaptable.

Plan for Coal Industry

THE National Coal Board proposals published last week provide for an output increased by 18 per cent. in the 15 years 1950-65, to be achieved by reconstruction of some 250 of the existing 950 collieries in production, 20 new large collieries and 50 new drift mines, and closing of 350-400 pits. The estimated capital cost is £635 million, of which £487 million is on collieries (with £33 million for contingencies) and £115 million for "ancillaries" (coke ovens and so on). The £520 million for collieries is to be phased: £30 million in 1950, and £190, £160, and £140 million respectively in each of the succeeding five-year periods. The number of men employed is planned to be reduced by 80,000 over the 15 years—a much slower rate of decrease in manpower than has recently been taking place in the industry, but it is estimated that enhanced efficiency will enable the reduced labour force to increase the present output by 20 per cent., with a saving to the country (on mid-1949 prices) of 7s. a ton.

The following table gives the essentials:—

Division	Output 1949	Planned yearly output 1961-65	Output inc. or dec. per cent. 1950-65	Capital expenditure 1950-65 (£ millions)	Manpower inc. or dec. per cent. 1950-65
	(Millions of tons)				
Scottish	23·8	30·6	+29	64	−7
Northern (Northumberland, Cumberland) ...	12·8	15·1	+18	31	−18
Durham	26·4	27·0	+2	54	−26
North Eastern (Yorks.) ...	42·1	50·5	+20	72	−5
North Western (Lancs., N. Wales)	14·4	14·2	−2	33	+22
East Midlands (Notts., Derby, Leicester) ...	39·1	47·5	+21	79	+7
West Midlands (Staffs., Warwick, Salop) ...	18·3	19·9	+9	42	+10
South Western (S. Wales, Forest of Dean, Somerset)	24·2	32·7	+35	103	−5
South Eastern (Kent) ...	1·6	2·5	+56	9	+27
Total	202·7	240·0	+18	487	+11

Within the Divisions there will be some re-orientation in production trends, according as coal measures are exhausted or prove uneconomical to work. In the Scottish Division, for example, it will not be possible to avoid declines in the central coalfield, whilst output is to rise in eastern and south-western Scotland.

The railways as consumers have indicated that their needs are unlikely to change much over the years, though the qualities may change with variations in locomotive practice or with the progress of electrification. Without details available, it is not possible to say how far the railways will cut their coat to suit their cloth, and how far the N.C.B. has based its plan on the railways' qualitative requirements. As coal carriers, the railways were consulted in formulation of the plan. Important factors are the location of new power stations, and increased use of power transmission lines. It is understood that, as most new pits will be in or on the edge of existing coalfields, comparatively little new siding or branch construction is necessary; nor does wagon supply or line-capacity seem to present difficulties. The N.C.B. statements therefore regarding reduced rail capacity as a restricting factor in coalfield development, need clarification. It is said, for instance, that the capacity of trans-Pennine lines restricts coal carryings from Yorkshire pits to their natural *débouché* in Lancashire, cramping mine development in Yorkshire and necessitating a higher output in Lancashire than is economically desirable from the N.C.B. viewpoint. In the past, British railways have usually kept well (and sometimes too far) ahead of the coal industry's needs in carrying and handling capacity. The Chairman of the Board, Lord Hyndley, emphasises that the plan is short-term, and provisional. Even so, and given the present desperate need for coal in industry, the plan in its scope

and comprehensiveness is a contrast to the relative stagnation in the capital development of the railways, with their depleted financial resources and the Treasury ban on many badly-needed capital works.

British Transport Commission Traffic Receipts

ALTHOUGH the receipts of the British Transport Commission from its principal carrying undertakings, as shown by the advance information for the four-week period ended November 5, are over 11 per cent. up on the corresponding period of last year, British Railways passenger takings were down nearly 5 per cent. The 25 per cent. increase over 1949 in the railways' coal traffic receipts, however, has continued, whilst there have been sharp rises in general merchandise and livestock (19 per cent.) and in mineral (18 per cent.) receipts. These are encouraging, even in the light of the May rate increases. The increases in freight receipts over the last few weeks are already making themselves felt in the British Railways aggregate for the year, which for 44 weeks shows an increase in coal traffic takings of over 13 per cent. over last year, and of nearly 7 per cent. for general merchandise and livestock.

The fall in passenger receipts seems to have stopped, largely through seasonal causes, such as the cessation of holiday travel by motorcoach. The 11 per cent. rise during this period, compared with last year, in London Transport railway and the 3 per cent. rise in bus and coach receipts are obviously connected (it is not clear how) with the London Passenger Charges Scheme, effective from October 1; this last, however, has so far had no discernible effect on British Railways passenger receipts, though the analysis in due course of passenger bookings may throw light on this. The receipts of the B.T.C. road passenger undertakings in Scotland and elsewhere outside the London Transport area were nearly 12 per cent. above last year's, but the reason for this is not yet apparent.

	Four weeks to November 5		Incr. or decr.	Aggregate for 44 weeks		Incr. or decr.
	1950	1949		1950	1949	
	£000	£000		£000	£000	
British Railways						
Passengers	6,864	7,188	— 324	92,575	99,291	— 6,716
Parcels, etc., by passenger train	2,561	2,241	+ 320	26,003	24,540	+ 1,463
Merchandise & livestock	7,651	6,422	+ 1,229	73,460	68,714	+ 4,746
Minerals	2,823	2,396	+ 427	27,181	24,894	+ 2,287
Coal & coke	6,742	5,400	+ 1,342	64,921	57,127	+ 7,794
	26,641	23,647	+ 2,994	284,140	274,566	+ 9,574
Road Passenger Transport, Provincial & Scottish						
Buses, coaches & trolleybuses	2,758	2,468	+ 290	32,830	30,485	+ 2,345
London Transport						
Railways	1,245	1,118	+ 127	12,206	12,150	+ 56
Buses & coaches	2,440	2,359	+ 81	26,177	26,690	— 513
Trolleybuses & trams	827	836	— 9	8,956	9,275	— 319
	4,512	4,313	+ 199	47,339	48,115	— 776
Inland Waterways						
Tolls	72	54	+ 18	664	580	+ 84
Freight charges, etc.	63	60	+ 3	715	712	+ 3
	135	114	+ 21	1,379	1,292	+ 87
Total	34,046	30,542	+ 3,504	365,688	354,458	+ 11,230

Inland waterways receipts were 18 per cent. over those for the corresponding period of 1949. Even allowing for the rise in charges in May, this seems to point to increased industrial production, when taken into account with the rise in railway merchandise receipts. Against this, inland waterways receipts for the preceding four-weekly period were only 8, and for the period ended September 10, only 10 per cent. above the corresponding 1949 figures. For the aggregate of 44 weeks they are under 7 per cent. up on last year.

If the present trends continue, the Commission's total receipts for the year should be slightly above those for 1949. The future of British Railways freight traffic, allowing for fluctuations and the new coal production plan, is reasonably bright, though mainly as the result of the 16⅔ per cent. rate increases in May. There is no reason to think that next year will not bring increased road competition for passenger traffic, and any decrease in public spending power may well drive more passenger traffic to the road.

PERCENTAGE VARIATION 1950 COMPARED WITH 1949

	4 weeks to November 5	44 weeks to November 5
British Railways		
Passengers	— 4·5	— 6·7
Parcels	+ 14·2	+ 5·9
Merchandise & livestock	+ 19·1	+ 6·9
Minerals	+ 17·8	+ 9·3
Coal & coke	+ 24·8	+ 13·6
Total	+ 12·6	+ 3·4
Road Passenger Transport	+ 11·7	+ 7·6
London Transport		
Railways	+ 11·3	— 0·4
Buses & coaches	+ 3·4	— 1·9
Trolleybuses & trams	— 1·0	— 3·4
Total	+ 4·6	— 1·6
Inland Waterways	+ 18·4	+ 6·7
Aggregate	+ 11·4	+ 3·1

Tasmanian Government Railways

THE report of the Tasmanian Commissioner for Transport, Mr. S. Wilson, for the year ended June 30, 1949, records an increased deficit on working, the operating ratio having risen from 138 per cent., for 1947-48, to 142 per cent. Principal results are as follow:—

	1947–48	1948–49
	(Thousands)	
Passenger journeys	2,974	3,295
Passenger train mileage	1,093	1,087
Goods and mineral tonnage conveyed	790	775
Goods ton-miles	65,144	67,328
	(£ thousands)	
Passenger revenue	221	193
Goods traffic revenue	664	785
Total operating revenue	958	1,049
Working expenses	1,323	1,488
Loss on working	365	439
Interest and depreciation	244	245
Deficit	605	684

The 10 per cent. increase in passenger journeys was mainly in suburban season-ticket traffic, which rose by 68 per cent. through increase in tramway fares and abolition of weekly tramway tickets. Regarding goods traffic, the report attributes the steady increase in recent years in the number of ton-miles to increased length of haul. The decrease in the tonnage of freight available was due mainly to loss of calcines traffic, now carried by sea. Revenue per ton-mile increased by 15 per cent. to 2·7d. Since rates were increased in October, 1948, tonnage decreased by 2 per cent. and revenue rose 22·5 per cent.; this represents an increase of 24·5 per cent. in receipts per ton, which corresponds to the rate increase. The effect of the rate revision varied on traffics: thus the tonnage of Tasmanian fruit fell by 33, and revenue by 15 per cent., but as both tonnage and revenue had previously been decreasing by 20 per cent., the increased charges arrested the decline in revenue. A fall of 10 per cent. in agricultural traffic seems largely due to a recent trend away from agriculture to pastoral production.

During the period under review the basic annual wage of railway employees rose, in May, 1949, from £316 to £323, under awards of the Arbitration Court. The prices of New South Wales coal rose from 50s. 9d. to 64s., and of Tasmanian from 27s. 6d. to 29s. a ton, and of bulk fuel oil from 231s. to 273s. 6d. a ton. The coal strike which began in June, 1949, necessitated curtailment of passenger and goods services, resulting in an estimated loss of revenue of £110,000, though only a small part of this applied to the financial year 1948-49.

The rolling stock position remained acute, states the report, because of prolonged neglect and the effects of the war. On order from the United Kingdom were 32 600-h.p. diesel-electric, 10 medium and 8 heavy steam, and two 200-h.p. diesel-mechanical shunting locomotives, all due for delivery by the end of 1951; also on order were a number of articulated diesel railcars and 253 goods vehicles.

Nationalisation and the Mechanical Engineer

MR. R. A. RIDDLES, President of the Institution of Locomotive Engineers, has been closely associated with the mechanical engineering side of British railways throughout his career, which commenced when he joined the former L.N.W.R. as an apprentice at Crewe Locomotive Works in 1909. During the war he was for some time responsible for the provision of transport equipment at the Ministry of Supply. He is the first Member of the Railway Executive to serve as President of the Institution, and it was only fitting, therefore, that when he chose the subject for his address on November 16, he should deal with some of the effects of State ownership of the former main-line railways. He covered such a wide field that it is possible to deal only with its more important aspects here.

Mr. Riddles said that it was not unusual in the Presidential address to record individual experiences. Therefore he would like to show what was being done, and what it was expected would be done, and how the problem of the nationalised railways was being tackled as it affected the individual engineer and the industry as a whole. The working connection between mechanical and electrical engineering included the care of road vehicles, numbering some 14,000, and, considering that the maintenance bill for locomotives was £27,000,000 and for carriages & wagons £35,000,000 with a renewal programme of approximately £26,000,000 a year for carriages and wagons and £4,500,000 for locomotives, involving a staff of 100,000, this was some indication of the extent of the problems. So used were we today in dealing with millions that possibly even with this statement of expenditure it might be difficult to comprehend all that was involved. Regarding organisation, the President said that the four main-line railways with their four Chief Mechanical Engineers and two Electrical Engineers were to work as one using as quickly as possible the best of all methods in design and works practice.

In the various Regions it was necessary to reconcile and unify the different types of departmental organisation which had been inherited by the Railway Executive. Varying practices had grown up on the former companies as to the division of responsibility and control. Whereas on the former G.W.R. and L.M.S.R. one officer, the Chief Mechanical Engineer, was responsible for all locomotive, carriage and wagon, electrical and outdoor machinery work, on the former L.N.E.R. and Southern Railway the responsibility for these functions was vested in two officers, namely, the Chief Mechanical Engineer and the Chief Electrical Engineer, with varying divisions of function. Although, at the time of nationalisation, the responsibility for all locomotive and carriage and wagon work was the function of the Chief Mechanical Engineer on all the four companies, this had not always been the case.

Before the amalgamation of the railways into four group companies in 1923, it was the practice with a number of the larger companies for the Locomotive Department under the Chief Mechanical Engineer to be separated from the Carriage & Wagon Department, with an independent Chief Officer. Largely because of the size of the two departments it was decided that this separation of locomotive and carriage and wagon activities should be introduced into the departmental organisation in all Regions of British Railways. On the other hand the rapidly increasing interdependence of mechanical and electrical engineering on the railways today pointed clearly to the desirability of amalgamating those two activities in the Regions where they had hitherto been separately controlled. There are thus in each Region two officers, a Mechanical & Electrical Engineer and a Carriage & Wagon Engineer, with functional responsibility to the Member of the Executive through his chief officers at headquarters. It was, of course, not practicable to introduce the agreed arrangements on all Regions simultaneously. Great progress had nevertheless been made towards completion of the new organisation and experience was increasingly showing that the principles on which it had been based were sound. Its success, the President thought, was assured, but it had yet to be proved, and the next two years would be momentous. Next year, British Railways would commence the production of six new types of locomotives and twelve new types of coaching stock, together with new wagon standards covering 34 types, and, naturally, with many years of railway life and experience behind him, this he immediately felt was the time to put into practice personal ideas formed in earlier years. He was glad to say that this impulse was only a fleeting one, as, obviously, with the value of all the varied experiences of the main-line companies now to hand, some advantage had to be taken of them. The first step, said Mr. Riddles, was to examine the pooled experience affecting the problems by careful investigation in detail of the differing practices of the Regions. To do this a series of Committees termed "Policy Committees" was set up. A representative from each Region, recommended by the Chief Mechanical Engineers, with a Chairman selected by himself, tackled individual problems such as works organisation, standardisation of components and so on.

On questions relating to alternative forms of motive power, Mr. Riddles said that the mechanical engineer was concerned in all forms of motive power, *i.e.*, steam, diesel, gas turbine, electric, or any other which might develop. Being human he might have his special interests, but, professionally, there was a job for him to do in connection with all. Practically there was little to choose between them, for all would perform work and give service, and a like value of power. Economically, however, they were not equal, and determination of the true cost level of each was an exceedingly complex matter in which solid fact was hard to come by. The engineer's only interest was in facts, and his responsibility was to present the facts without fear or favour. At present there was undoubtedly a field for steam, for the internal combustion engine, and for electric traction on the railways. The case for electrification and the internal combustion locomotive was often and very clearly stated. With regard to the case for steam at present in many cases a pound spent would buy more tractive effort than with other forms of traction.

The President gave comparisons based on present-day prices and said that the cost for the diesel-electric and the gas-turbine-electric locomotives would be less if larger numbers were ordered. The costs were as follow:—

Type	Cost	Starting t.e.	Cost per lb. of t.e.	1 hour d.b.h.p.	Cost per d.b.h.p.
	£	lb.	£ s. d.		£ s. d.
B.R. Std. class 5 4-6-0 steam locomotive	16,000	26,120	0 12 3	1,200	13 6 0
1,600-h.p. C.C. diesel-electric locomotive	78,200	41,400	1 17 9	1,200	65 0 0
2,500-h.p. AIA-AIA gas-turbine-electric locomotive	138,700	33,000	4 4 0	2,000	69 7 0
C.C. electric locomotive for Manchester-Sheffield line	37,400	45,000	0 16 8	2,120	17 12 10

With steam the money could be spent without exceptional capital investment at any one time. Also, although thermal efficiency of steam was admittedly low, actual fuel costs per unit of power at the drawbar did not rank very high in the total relative costs, and substantial developments were still being introduced on the mechanical side to reduce maintenance costs and increase availability. When these facts could no longer be substantiated, the day of steam would be over.

If one accepted, by some other form of motive as yet known or unknown or undeveloped, eventual supersession of steam on proved economic grounds, 19,500 steam locomotives would take a long time to liquidate on any possible financial policy, and Mr. Riddles considered there was a case for continuing the development of the steam engine along with the diesels and electrics for some time yet. He also dealt at length with the standardisation of locomotives, carriages, and wagons, and described in considerable detail the work carried out by the Policy Committees. He said that the operating stocks of locomotives had been reduced from 20,459 at the time of nationalisation to 19,112. There had also been a considerable reduction in the number of locomotives, carriages, and wagons under and awaiting repairs.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Pullman Car Trains

October 3

SIR,—I had always wondered how British Railways could possibly lose any money when, on successive journeys with the 3.20 p.m. Waterloo to Bournemouth, I would see almost every seat in the train occupied, and people queueing up for tea outside the restaurant car.

I got the answer last Friday when, for a change, I travelled with the "Bournemouth Belle." Though Friday is normally considered a peak day of the week, there were no more than seven or eight people in my third class carriage, yet we were served by no less than three attendants and the train was made up of twelve Pullmans. What is the use of a set of luxury coaches, when it is only run for five hours each day and for the benefit of fewer than 100 people, when at other times hardly enough stock is made available to seat every passenger?

The Pullmans would be used much better, if the "Belle" trains were abolished and two or three Pullmans were included in a set of ordinary express coaches; they could be used for several return journeys daily, and passengers at any time of the day would have the opportunity of travelling Pullman. The same facilities should be extended to every main line in the country, as it is grossly unfair to reserve comfort to a few parts of the country.

Yours faithfully,

F. E. LAMOND

Clare College, Cambridge

[Our correspondent is hardly fair in basing his strictures on observations made on a single journey, when the train was doubtless unusually poorly-patronised. It is likely that on the particular day the train was more heavily loaded on the return journey. We understand that normal experience has dictated the present twelve-coach formation of the "Bournemouth Belle."—ED., *R.G.*]

Streamliner Success

November 9

SIR,—It seems almost axiomatic that any reference in *The Railway Gazette* to the success of a streamline passenger service in the U.S.A. will draw a remonstrance from Mr. R. Bell that the facts have been exaggerated, and that American railways are losing money heavily on their passenger operation. His letter in your issue of October 20 & 27 is no exception to the rule.

I would point out to Mr. Bell, however, that so far from "one or two special runs" only of American diesel streamline trains proving profitable, published statistics have shown that *dozens* of these attractive services are paying their way most handsomely, and also that passenger losses are due in the main to the unprofitable operation of subsidiary and branch lines. Moreover, if Mr. Bell read his American railway literature with more care, he might discover that the purely arbitrary basis on which the Interstate Commerce Commission divides up the net railway operating expenses as between passenger and freight traffic is by no means agreed to by many operating officers, who consider that this division puts the passenger traffic in a more unfavourable position than is justified by the facts. He might also have noted that a large proportion of the loss on American passenger traffic hitherto has been due to the inadequate payment received by American railways for handling and carrying U.S. mail—an injustice which, it seems, may at long last be in part rectified.

Apart from these points, however, one would like to put three questions to Mr. Bell:—

(1) If he were in control of a large American railway, assailed by competition from the air and on the roads far more severe than anything experienced in Great Britain, what would he do to keep any passengers at all in the trains which the I.C.C. would still compel him to run? Would his policy of masterly inactivity result in extinguishing the passenger loss? If so, passenger traffic in Great Britain, where all such high-speed enterprise as streamline trains and mile-a-minute running now seems *tabu*, ought to show a substantial profit. Yet one notes on the opposite page of *The Railway Gazette* to that on which you have printed Mr. Bell's letter, that British passenger receipts from January 1 to October 8, 1950, appear to have declined by £6,392,000, or 10 per cent., from those of the corresponding period in 1949, and by 13 per cent. from those of 1948.

(2) Can Mr. Bell explain (to take one striking example) how it is that, since the first three high-speed streamline trains were introduced between Chicago and St. Paul-Minneapolis in 1934 and 1935, a total of seven streamliners is now needed in each direction daily over the three routes concerned, most of them twice as capacious as the original formations, to handle the passenger traffic that these trains have created?

(3) Lastly, when Mr. Bell was Assistant Chief General Manager of the London & North Eastern Railway in 1935, did he oppose the introduction of the "Silver Jubilee" streamliner between Kings Cross and Newcastle? Moreover, did he oppose even more strenuously the introduction of the "Coronation" and "West Riding Limited" streamline trains in 1937, and, indeed, every attempt of his enterprising company to make its long-distance passenger services more attractive to the public?

Yours faithfully,

CECIL J. ALLEN

70, Rowlands Avenue, Hatch End

Fifteenth International Railway Congress

November 14

SIR,—On page 390 of your issue for October 20 & 27 it is stated that during the discussion on railway medical and welfare services I "emphasised the importance attached by H.M. Government to the participation of railway employees in the recruitment of medical personnel." This is not correct. What I did emphasise was the value placed by the British Transport Commission and the Railway Executive on the widest practicable opportunity being afforded for the staff to be brought into consultation with the management. I referred to the special schemes for this purpose which are already operating at all levels in the railway service under which periodical meetings are held between elected representatives of the staff and the management. I did not mention the Government, neither did I allude to the recruitment of medical personnel.

Yours faithfully,

G. B. THORNEYCROFT
General Secretary,
Railway Clerks' Association

25, Euston Road, N.W.1

[Our account of the meeting of Section IV at which Mr. Thorneycroft spoke is based on the official record, which is perhaps somewhat ambiguous, but states that he "expressed the British point of view"; as Mr. Thorneycroft was present under the auspices of the Ministry of Transport, this view was assumed to be that of H.M. Government.—ED., *R. G.*]

MACHINE TOOL EXPORTS.—The Board of Trade has made an order, which came into force on October 6, under which the export of power-operated metal-working machine tools is made subject to licence. Under an open general licence, which takes effect as from the same date, exports to Commonwealth countries and the United States are exempt from the licensing procedure.

THE SCRAP HEAP

Armistice Coach

A dining car was ceremonially installed on November 11 in the Compiegne Forest, to replace the historic coach in which the 1918 armistice was signed. It is a reproduction of the original coach which was taken to Germany during the recent war and destroyed.

L.M.R. High Road Safety Standard

Awards for safe driving on the road have just been made to 3,951 horse and motor drivers of the London Midland Region of British Railways. The awards are for the 1949 safe driving competition which has been organised by the Royal Society for the Prevention of Accidents.

Highest London Midland safety record is held by Van Driver Wally Clayton, Euston, who has gained the 32-year bronze bar, the maximum possible; 151 road drivers in various parts of the L.M.R. hold a safe driving record of 20 years and over. Other centres where L.M.R. road drivers have high awards are Birmingham 355, Leicester 246, Liverpool 467, London 703, Manchester 939, and Stoke 175.

Oyster Special

When Lewis Carroll created his oyster-loving carpenter, and the walrus who ate more than his share, there was no idea that one day British Railways would carry them as guests of honour.

However, when running a special train from Liverpool Street to the oyster feast at Colchester on October 27, the Eastern Region felt the opportunity too good to miss. A special headboard was prepared illustrating in colour the walrus and the carpenter enjoying a feast of oysters for which Colchester is so famous.

Flanking the platform barriers, two life-size cut-out figures of the walrus and the carpenter, again in colour, invited passengers to go forward to the engine for a glimpse of the scene symbolic of the occasion.

Mr. C. K. Bird, Chief Regional Officer, Eastern Region, who arranged the running of the train, was among the guests.

Three Million Travelled Cheaply

So popular have been the cheap day, half-day, and evening excursions issued during the summer by the London Midland Region of British Railways that over 3,000,000 tickets were issued and over 6,000 extra trains were run. The trips ranged from a short one of 30 miles to Blackpool to a 400-mile London to Dublin sight-seeing tour lasting twelve hours.

Cuts Both Ways

Recently there have been complaints about dirty railway compartments, and, from our own experience, there is justification for them. But there is another side to this.

A colleague who does much railway travelling tells us that a few days ago he entered a first class compartment of a train at a Glasgow station. It had recently come in from the coast and was returning after only a few minutes, so that there was not much time for cleaning.

On the floor was a new carpet, and it was covered with cigarette ash, some cigarette ends which had been stamped out, and a couple of pipe dottles. The ash was thickest at the ends of the compartment where ash-trays were fastened to the wall.

If carriages are dirty, the blame does not rest entirely with the railway. After all, people don't flick their ash or stamp out their cigarettes on the carpets at home. Or do they?—*From "An Editorial Diary" in "The Glasgow Herald."*

Neglected Forms of Transport

Whilst there are several societies for advancing the claims of forms of transport that have fallen out of favour with the authorities I have yet to hear of an organisation whose object is to put forward the advantages of the sedan chair.

Consider the points in its favour; kerbside loading, use of home-produced fuel, little danger of skidding, noiseless, long-lasting bodywork, no fumes or smell, no rattle or vibration, a smooth and pleasant motion, and the absence of an expensive track.

True, the speed may be low, but in today's congested traffic, its average speed does not compare unfavourably with that of other types of road transport.—*Desmond F. Croome in a letter to "Modern Transport."*

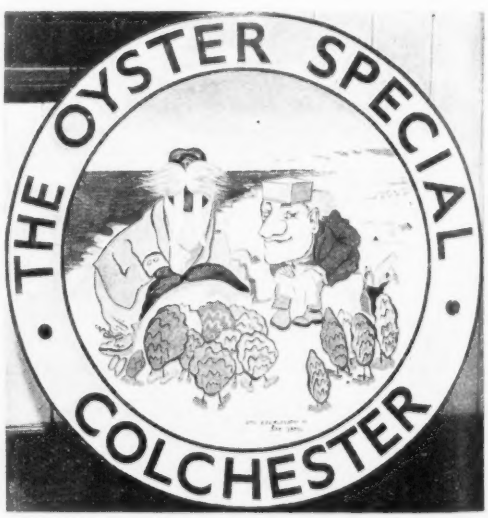
Irish Veteran on Exhibition

The old Bury single driver locomotive, No. 36, one of the most famous pioneer locomotives of Ireland, which is preserved at Inchicore, Dublin, has been placed on exhibition on a specially-prepared stand in the Glanmire Road Station of Coras Iompair Eireann at Cork. A piece of the original Cork-Dublin track, even older than the locomotive, has been used in the stand.

The locomotive was one of the earliest to run on the Dublin-Cork line and was withdrawn from service in October, 1875, having then covered a total of 500,000 miles. It was built in January, 1848, by Bury, Curtis & Kennedy, of Liverpool, for the Great Southern & Western Railway, and was capable of 60 m.p.h. hauling four coaches.

The engine has been painted in its original colours, and its large copper dome is brightly polished.

When the "Oyster Special" left Liverpool Street the above poster was exhibited at the barrier



Engine headboard of the 11.54 a.m. express from London to Colchester on October 27

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

TASMANIA

Trials of New Diesels

Two of the 32 diesel-electric locomotives ordered from The English Electric Co. Ltd. are now in regular service between Hobart and Launceston. Electric transmission enables the locomotives to develop a high tractive effort at low speed and over the steepest gradients they are hauling approximately 100 tons more than the most powerful steam locomotives now in service.

The General Manager has stated that the new locomotives are capable of being worked 6½ days a week, 23 hours a day. It is hoped that in two or three years when all the new locomotives on order are in service the Tasmanian Government Railways will be independent of New South Wales coal supplies. In the event of a coal shortage it will be possible to maintain a reasonable schedule of passenger and goods trains on the main lines as approximately half the total train mileage will be run by diesel power.

The two 3,000-ton tanks for distallate which it is proposed to erect at Hobart will allow of bulk purchases of this fuel at a reduced cost compared with the retail prices now paid.

WESTERN AUSTRALIA

Growth of Railway Road Service

One of the major moves in the Railway Department since the end of the war has been the development of the Railway Road Service which is now operating on 26 different routes throughout the southern half of the State, with routes totalling 2,738 miles.

As a result, in the lower South-West mixed and passenger trains have been withdrawn and the engines and crews released for goods haulage work. The Perth-Hopetoun bus service just introduced is believed to be the longest bus service in Australia (364 miles). This service caters for an area, most of which is not served by rail.

During the year ended in June, the buses covered 1,319,914 miles and conveyed 498,892 passengers. In the previous year the mileage was about 1,000,000 and the number of passengers carried about 360,000. In June this year the service had 43 buses, including passenger-freighters, in operation but these are to be increased to a fleet of 53 within the next two or three months.

In addition to the passenger service, nine panel vans are under the control of the Railway Road Service. They are used entirely for newspaper deliveries, and the vans run a total of 1,093 route miles.

For over four years the Perth-Kojonup was the only service, but in March, 1946, the Perth-Yanchep service was inaugurated, and from that time new services were quickly added. In 1947 two new services were added, in 1948 six and in 1949 nine. Already this year there have been seven additional services. A new service has been introduced between Perth and Narrogin, *via* York, 146 miles, and others are under consideration.

VICTORIA

Railwaymen's Strike

All trains throughout the State stopped running at midnight on October 15 when 3,500 train-crew members struck. The dispute began when a conciliation authority refused to ratify an agreement between the Railway Commissioners and some of the men to settle an earlier claim for increased wages and improved working conditions. The strikers are demanding £(A)1 a week marginal increase, payment for intervals between jobs, and new overtime rates. The stoppage has made idle 8,500 railway employees.

NEW ZEALAND

Auckland Underground Railway

An underground railway in Auckland costing £5,000,000 has been proposed as a solution to city traffic problems by Sir William Halcrow and Mr. J. P. Thomas who visited Auckland last year. Their report has now been published.

Main recommendation in the report was for an underground railway linking the suburban lines, which would be electrified. Immediate recommendations of the proposed system would involve capital expenditure of £5,456,500. The report suggested twin tunnels to carry railway traffic under Auckland Harbour and two four-lane bridges across the harbour. The experts estimated that a train service linking both sides of the harbour would increase the population of Auckland far beyond the estimated 650,000 by 1975.

CANADA

Diesels for P.G.E.

The Pacific Great Eastern Railway has placed a $1,000,000 order for six diesel locomotives with Montreal Locomotive Works Limited for delivery early next year. The P.G.E. locomotive stock at present includes five small diesels originally designed for shunting work.

C.N.R. Dieselisation

With the ordering by the Canadian National Railways of 18 more diesel-electric locomotives of 1,000 h.p. two additional services will be dieselised. The new locomotives, costing approximately $2,385,000, will go into service from Montreal to Granby, Quebec, and between Matapedia and Gaspe when received in the Spring of 1951 from the Canadian Locomotive Company. Their purchase brings to $49,000,000 the cost of new C.N.R. equipment ordered this year.

Three of the locomotives will operate on the Montreal-Granby service, replacing the present steam and electric equipment, and when they are in service the electric lines of the company between Marieville and Granby, which are part of the Montreal & Southern Counties Railway, will be removed and the present electric service will run from Montreal only as far as Marieville, and from there to Ste. Angele.

FRANCE

Combined Air-Rail Tickets

Air France and the S.N.C.F. have reached an agreement to facilitate the purchase of combined air and rail tickets for travellers in France and French overseas territories. Air France agencies in France and North Africa are authorised to sell tickets and reserve seats on all French trains. At the same time, 84 French stations are equipped to sell air tickets enabling railway passengers to continue by air.

BELGIUM

Cost of Electrification

In a report submitted to the Senate it is stated that fr.1,118 million have been spent on railway electrification from the time of the liberation until December 31 last year. Of this amount fr.605,000,000 have been spent on the Brussels-Charleroi line, fr.268,000,000 on the line from Linkebeek to Antwerp North, and the remaining fr.245,000,000 on rolling stock. The completion of the second part of the programme is expected at the end of 1954. This includes the line from Ostend to Liege, with the branch lines Bruges-Knokke, Bruges - Blankenberge, Ghent - Melle, Aalst-Denderleeuw, Malines, Louvain and Voroux-Kinkempois, a total of 415 km., at a cost of fr.4,760 million. A further stage will bring the aggregate length of the electrified system to 1,500 km. at a total cost of fr. 16,500 million.

SAAR TERRITORY

Coal and Mineral Traffic

During the first half of 1950, freight traffic over the Saar Railways was slightly less than the average for either half of 1950. Coal and coke accounted for 85 per cent. of export traffic, of which some 60 per cent. was consigned to French, and 30 per cent. to German destinations. Of import traffic, 60 per cent. was iron ore, and 80 per cent. originated in France and the rest in Germany. As a result of reduced French imports of Ruhr coal and coke, transit traffic dropped 25 per cent.; coal and coke from Germany to France amounted to 80 per cent. of transit traffic.

Locomotive Feed-Water Heater Installation

Equipment developed in the U.S.A. for passenger and fast freight services

A LOCOMOTIVE feed-water heater of simple and effective type, but of unusual appearance, is the Elesco, used by the Central of Georgia Railway, U.S.A., for its 480 class main-line 4-8-2 engines with 69-in. wheels and 27 in. by 28 in. cylinders.

Mr. H. E. Hales, Superintendent of Motive Power, has furnished us with the accompanying drawings relating to the equipment on engines Nos. 466 to 497 (except No. 479), which operate in passenger and fast freight service, and have conventional exhaust, chimney, and smokebox layout with the usual smokebox deflector plates and netting.

These heaters are on the exhaust steam principle. Fig. 1 shows the original arrangement, with the heater in front of the chimney and above the smokebox, but though the function of raising the water temperature was accomplished satisfactorily, the location resulted in smoke and steam trailing down over the cab. Therefore, the arrangement was changed to that shown in Fig. 2 in which, though retained in front of the chimney, the heater box is partly lowered into the smokebox.

Details of the pipe connections are shown in Fig. 1; these are retained, with only the necessary changes, in the modified arrangement, in which, though the cover is still quite accessible, there is a lower radiation loss.

In the heater itself there is nothing out of the ordinary, and in principle it resembles the well-known Knorr apparatus.

The exhaust steam from the cylinders is passed through tubes surrounded by the feed water; but extra temperature rise is obtained by leading the exhaust steam from the feed-water pump and the Westinghouse air-brake pump to the heater. Also, for use during coasting periods, there is provided a 1-in. live steam connection to the heater box.

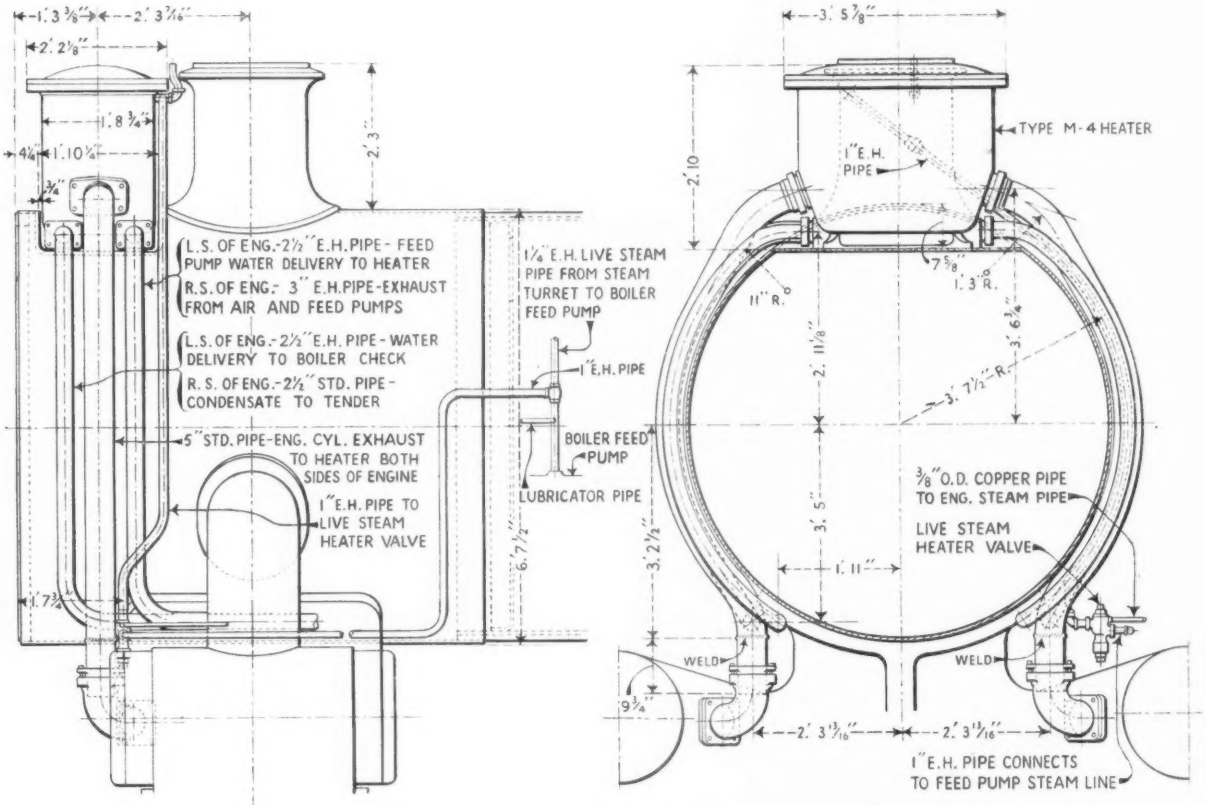

L.S. OF ENG.-2½" E.H. PIPE - FEED PUMP WATER DELIVERY TO HEATER
R.S. OF ENG.- 3" E.H. PIPE-EXHAUST FROM AIR AND FEED PUMPS
L.S. OF ENG.- 2½" E.H. PIPE - WATER DELIVERY TO BOILER CHECK
R.S. OF ENG.-2½" STD. PIPE - CONDENSATE TO TENDER
5" STD. PIPE-ENG. CYL. EXHAUST TO HEATER BOTH SIDES OF ENGINE
1" E.H. PIPE TO LIVE STEAM HEATER VALVE
1¼" E.H. LIVE STEAM PIPE FROM STEAM TURRET TO BOILER FEED PUMP
1" E.H. PIPE
BOILER FEED PUMP
LUBRICATOR PIPE
TYPE M-4 HEATER
1" E.H. PIPE
⅜" O.D. COPPER PIPE TO ENG. STEAM PIPE
LIVE STEAM HEATER VALVE
WELD
WELD
1" E.H. PIPE CONNECTS TO FEED PUMP STEAM LINE

Fig. 1—Original arrangement of Elesco feed-water heater, Central of Georgia Railway, U.S.A.

BRITISH STANDARD FOR CARBON STEEL CASTINGS.—Recently the British Standards Institution has published B.S. 592:1950 dealing with carbon steel castings for general engineering purposes. This is a revision and an extension of the 1940 edition, and provides a comprehensive range of carbon steel castings, including the construction of ships, marine engines, and railway rolling stock, and it replaces B.S.24, Part 4, Specification No. 10. The three grades of castings differ from those in the 1940 edition in that they are of 28, 32, and 35 tons per sq. in. minimum ultimate tensile stress, and full chemical composition is specified for all grades. Inspection and testing is covered in detail and an appendix gives recommendations on the repair of castings by metal-arc welding. Copies may be obtained from the British Standards Institution, Sales Department, 24, Victoria Street, London, S.W.1, price 2s.

STEEL PRODUCTION AGAIN A RECORD.—Steel production in October was at an annual rate of 17,040,000 tons, as compared with 15,959,000 tons in October, 1949, which is the highest rate of production ever achieved in that month. Pig iron output was at an annual rate of 10,084,000 tons as compared with 9,565,000 tons a year ago. Only once before has the steel output rate passed the 17,000,000 mark and that was in March this year.

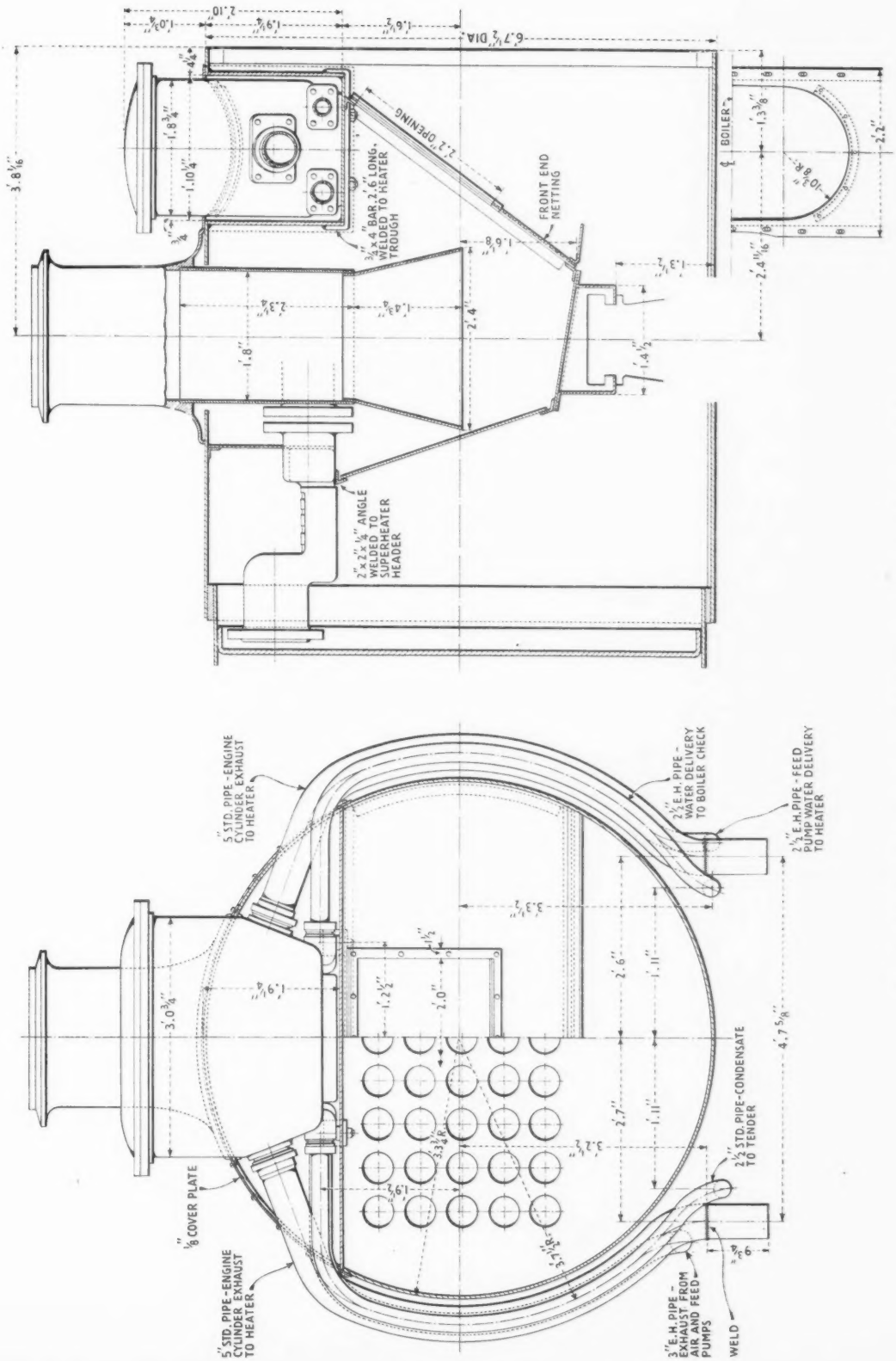

6.7½" DIA.
2.2" OPENING
¾" x 6" BAR 2.6" LONG. WELDED TO HEATER TROUGH
FRONT END NETTING
BOILER
2"x2"x¼" ANGLE WELDED TO SUPERHEATER HEADER
5" STD. PIPE-ENGINE CYLINDER EXHAUST TO HEATER
2½" E.H. PIPE - WATER DELIVERY TO BOILER CHECK
2½" E.H. PIPE - FEED PUMP WATER DELIVERY TO HEATER
⅛" COVER PLATE
2½" STD. PIPE-CONDENSATE TO TENDER
3" E.H. PIPE - EXHAUST FROM AIR AND FEED PUMPS
WELD

Fig. 2—Modified arrangement, with heater partly lowered into smokebox

Girder-Type Silent Rail Joints

Design of fishplate for reducing track stresses and noise tested on London Midland Region main line

IT is generally recognised that the joints between the rails are the weakest parts of a railway track, and those most likely to give trouble, and to produce rough and noisy riding. Much has been written on this subject, and many improved types of joint have been designed and tested. Among the most recent devices is the Leigh joint, which is of two types, known as the Mark 1 and the Mark 2. The latter has been under test in standard bull-head track at Cheddington, on the main line of the London Midland Region from Euston to the North, for the past 4½ years. It has proved satisfactory, but the Railway Executive have not yet decided whether it has any advantage over the ordinary standard joint.

The joint was first designed with a view to reducing noise, and to overcome the troubles arising from high fishplate stress, rail hammer, and galling between the rails and fish plates. With the Mark 1 type of joint, the rail ends must be machined, and this increases the cost of production. To retain the desirable features of the joint, two types of fishplate have been designed: a silent-joint type (known as Mark 1), and another (known as Mark 2). The latter calls for no additional machining after the rails and fishplates have come off the rolling mills, other than that required by the standard type of joint, but retains all the advantages of the Mark 1, except that it is not silent.

In each type, one or both fishplates may be extended into the adjoining chairs, on which they make a positive bearing. This bearing is an essential feature of the design, and the width of the chairs is increased, to receive the fishplates. The bearing is ensured by making the fishplates slightly deeper (say, $\frac{1}{16}$ in.) than the rail, so that initially the rail is raised slightly off the chair seating. This clearance may disappear, and the rail take up its usual bearing, but the bearing of the fishplate is established, and its function as a girder between the joint sleepers is in no way impaired.

Design of Fishplates

The upper surfaces of the fishplates support the underside of the rail head, and also make a bearing on the web. Their lower edges bear on the side of the lower rail heads. The rail ends are thus supported on a girder-type fishplate, and the whole joint may be considered as a supported flexible, or working joint, rather than as a static, or rigid joint.

With the Mark 1 type of fishplate, the upper surface of the plate is brought up level with the running surface of the rail and about $\frac{1}{8}$ of the rail head is machined off, to accommodate the upstanding part of the fishplate. In the tests carried out, only one girder-type plate was used at each joint, and the outside fishplate was of the standard two-hole type. These tests showed exceptionally smooth running, with no trace of hammering. The relative movement of the rail ends under load was found to be only 20 per cent. of the least recorded with standard joints.

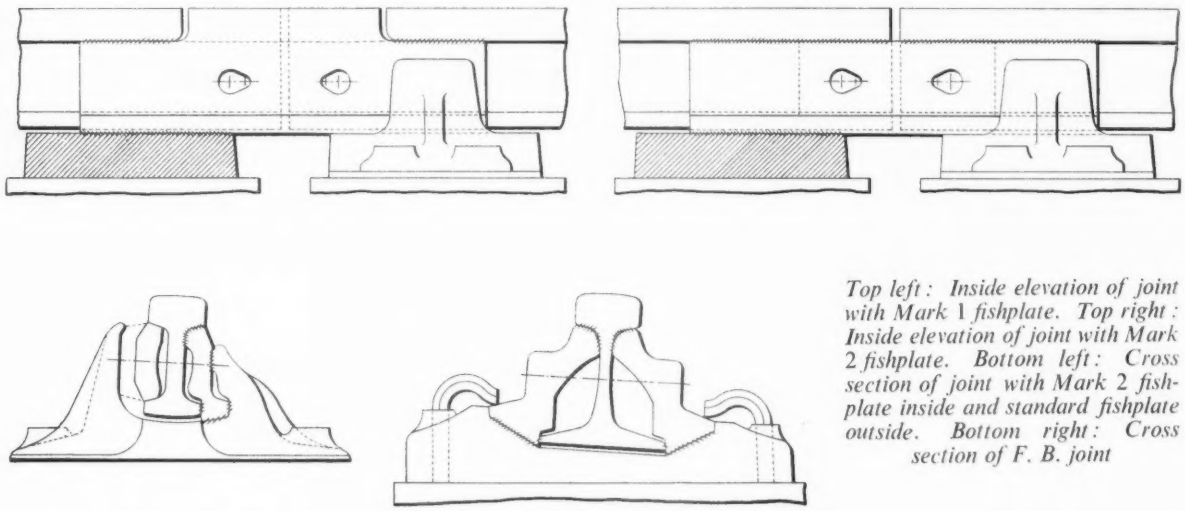
Some difficulties were experienced when the Mark 1 plates were first used. The top surface disintegrated under the live load. Also, the angle at the change of section, which should have been well rounded, was left sharp, and the upper surface of the fishplate did not make a continuous bearing on the rail web throughout its length. The last two faults caused high-intensity stress at the change of section, and fractures occurred. The cause of the failure has been identified, and should not recur.

Observations on the site reveal a proportionate decrease in the relative movement of the rail ends in the Leigh joint, compared with a standard joint, when the bolts are slackened. This is important from a maintenance point of view, and is due to the girder fishplate being held tight against the rail by the cheeks of the chairs.

From a comparison of the bearing loads and deflections of the Leigh and standard joints, it is estimated that the relative deflection of a joint with one girder plate, and one standard plate, is about half that of a standard joint, and that the bearing pressure is only about 20 per cent. The maximum stress in the standard fishplate of a Leigh joint is also estimated to be only half that in a standard joint; and the maximum stress in the girder fishplate is calculated to be 55·9 per cent. of that in a standard fishplate in a standard joint.

With the girder fishplates, the tension in the bolts is taken up by the rail web at the top, and by the side of the rail head at the bottom. This is of considerable advantage, as it avoids overloading of the upper surface of the fishplate, and the underside of the rail head. The joint assembly may be considered as a two-leaf spring, which gives a smooth flexibility, with only half the relative deflection of a standard joint.

The design of these girder-type fishplates is applicable to flat-bottom track, but it has not yet been tested with these rails. However, it is considered that it should be as satisfactory with this type of track as it has been proved to be with bull-head rails.



Top left: Inside elevation of joint with Mark 1 fishplate. Top right: Inside elevation of joint with Mark 2 fishplate. Bottom left: Cross section of joint with Mark 2 fishplate inside and standard fishplate outside. Bottom right: Cross section of F. B. joint

Railway Catering and Refreshment Services

Objects and progress of the Hotels Executive

By Lord Inman, P.C., J.P.,
Chairman, Hotels Executive

THE Transport Act of 1947 provided "for the establishment of a British Transport Commission concerned with transport and certain other related matters." One of the "related matters" was the catering services of the former railway companies. For that purpose the Hotels Executive was established in April, 1948, and commenced full operations on July 1 of that year. Let me outline the responsibilities assumed by the Executive. They cover a very big field.

The control of some 68 hotels, including many of the best known in the country: in London, those at Charing Cross, Paddington, Liverpool Street, Euston, and Kings Cross; business hotels like the Midland at Manchester, the Central at Glasgow, the Adelphi at Liverpool, the Queens at Leeds, the Royal Station at Newcastle, and the Queens at Birmingham; hotels which have an appeal for tourists, like Gleneagles, the Caledonian and the North British at Edinburgh, the Royal Station Hotel at York, and the Welcombe at Stratford-on-Avon; hotels at seaside resorts, including Tregenna Castle at St. Ives, the Knowle at Sidmouth, the Midland at Morecambe, and the Felix at Felixstowe. In these hotels, 1,500,000 visitors are accommodated every year and over 7,000,000 meals are served.

To control these hotels alone would be a formidable task, but the responsibility laid upon the Hotels Executive does not end here. There are 562 refreshment rooms where food is provided ranging from a full-course meal to a cup of tea. Some indication of the work involved will be seen by the fact that the number of hot beverages supplied is approximately 75,000,000 a year and sandwiches, snacks, etc., over 25,000,000.

Then there are the restaurant cars. These are available on nearly 450 regular trains covering 650 services. On these trains over 12,000,000 meals a year are served.

In addition to these main activities, the Executive controls various ancillary services such as bottling cellars, which handle annually 5,000,000 bottles of beer, stout, and cider, and 150,000 bottles of spirits. There are bakehouses, which make 1,600 tons of bread and 1,000 tons of cakes, pies, and pastries every year. There are 10 laundries, in which 21,000,000 pieces are washed annually. There are four repair shops, where furniture and upholstery work is undertaken.

From these facts, it will not be surprising to learn that the Hotels Executive is the largest hotel and catering organisation in the world.

Headquarters Organisation

At the headquarters of the organisation at Marylebone, there are the following departments:—

Secretarial—responsible for matters requiring to be submitted to the Executives, legal questions, fire insurance, Justices and Excise licensing matters.

Elliott [*S. Fry*

Lord Inman

Domestic Service—responsible for the selection of furniture, furnishings and decorations, for providing amenities generally for guests in the hotels and for staff in both hotels and refreshment rooms; in short, for the appearance of the premises and the comfort of the people who use them.

Finance—responsible for all questions of accounting and control, stocktaking, fixing of prices, travel agencies, outstanding accounts and economics generally.

Personnel—responsible for all matters affecting rates of pay and conditions of service, staff establishment, questions of discipline, travel facilities, staff appointments, transfers, education and training, superannuation and similar matters.

Purchasing—responsible for the purchase and distribution of provisions and dry goods (excluding perishables), linen, plate, and cutlery, glass and crockery, kitchen utensils, household requisites, and so on.

Wines and Spirits—responsible for the purchase, care and distribution of wines, spirits, beers, minerals, etc.

Works—responsible for the carrying out of structural, engineering and decoration work, repairs and alterations, maintenance of engineering plant, machinery and appliances of all kinds, research, de-infestation and fire precautions.

Advertising and Publicity—responsible for all printed matter, brochures, publicity, advertising and propaganda material, and its distribution.

Before leaving the headquarters organisation, two factors should be emphasised:—

1. That with very few exceptions all the present staff were employed by the catering departments of the former railway companies.

2. That in setting up the organisation regard has been paid to the necessity of economising in every possible way and the cost of administration shows a decrease as compared with the cost of maintaining the catering services in the old days.

The work of the Executive has been evolved to give the greatest flexibility and to ensure complete co-operation between all who are concerned in its management. These are the arrangements now in operation. There are four Superintendents, covering the following areas: London & Southern Area, North Western & Midland Area, Eastern Area, and Scottish Area. Their primary duty is to supervise the hotels and give encouragement and help to the local managers. They also advise and recommend schemes of development and improvement and indicate how and where economies can be effected. The question of co-ordination of services is important; for example, one hotel may be short of staff in a rush period and assistance can often be given from another hotel in the same area which may have staff to spare.

Since the formation of the Hotels Executive, the following hotels have been sold: the Royal at Grimsby, the Park at Preston, the Sandringham at Hunstanton, and Cruden Bay in Scotland. The Golf Course at Holyhead has also been disposed of. By these sales, the Executive has eliminated activities which had outlived their original purposes or were uneconomic.

At the same time a number of hotels have been modernised, refurnished and re-opened, including Dornoch, the Midland at Morecambe, the Great Northern at Peterborough, the Zetland at Saltburn, the Station at Aberdeen, and Turnberry Hotel. The reconstruction

of the Ailsa Golf Course at Turnberry will be completed early next year. Nine holes are already re-opened.

Schemes of improvement have been carried out at the Manchester Grill Room, the Royal Station Hotel, Newcastle, the Station Hotel, Perth, and the Victoria Hotel, Sheffield. Rehabilitation of the Adelphi Hotel, Liverpool, after the extensive war damage it sustained, is proceeding satisfactorily. Many other schemes are now in active preparation including:—

Charing Cross Hotel, London—new top floor, central heating throughout.

Great Northern Hotel, London—central heating.

Yarborough Hotel, Grimsby—additional bathrooms.

Great Northern Hotel, Leeds—improvements to kitchen and staff amenities.

Exchange Hotel, Liverpool—improvements to kitchen, staff amenities, ladies cloakroom, telephone boxes.

Queens Hotel, Birmingham—additional private bathrooms.

Royal Victoria Station Hotel, Sheffield—central heating.

Welcombe Hotel, Stratford-on-Avon—new staff wing, giving additional visitors' rooms.

Royal Station Hotel, York—central heating, modernisation of 30 rooms.

North British Hotel, Glasgow—central heating.

Restaurant Cars

During the last year there has been a substantial increase in the number of regular restaurant car services. Amongst the new features introduced are:—

Service of short breakfast on all Regions.

Facilities for reserving seats on certain trains.

Re-introduction of service of light refreshments on "Irish Mail" "Up" and "Down."

Refreshment Rooms

The refreshment rooms are divided into 22 districts under the supervision of District Managers, who are responible direct to the Refreshment Room Superintendent. One of our major problems has been concerned with these refreshment rooms. In many cases the buildings are obsolete, having been designed a hundred years ago. I have always felt great sympathy with the staffs who have to work in them and who, in many cases, have their homes in rooms actually on the stations. It cannot be easy or pleasant to have to spend days and nights in a smoke-laden, noisy atmosphere. We are doing everything possible to improve conditions and a number of additional staff houses have been acquired. A complete survey of the refreshment rooms throughout the country has been completed and in a number of cases schemes of modernisation have either been carried out or it is hoped to do so in the coming months.

In addition, many other facilities have been introduced for the travelling public. These include a cafeteria service, combined waiting and refreshment rooms, expansion of tea trolley services and the provision of mobile kiosks, all-night services at a number of stations, development of hygiene and food packaging, and the expansion of the training school for members of the staffs.

I have endeavoured to give a broad picture of this great undertaking. Coming into contact with so many millions of people covering all grades of society, the Hotels Executive must inevitably become a kind of public "Aunt Sally." Lord Horder quoted from an old colleague of his when he was speaking recently in the House of Lords: "There is something about food that seems to arouse the worst traits of those who become interested in putting their views before the public. In few other controversies has there been more bias, prejudice and ignorance reflected in public statements." I suppose that is inevitable in dealing with a subject that concerns us all so vitally. There must be some amongst so many who feel that they have cause for complaint. We are reluctantly forced to the conclusion that however hard we try, we shall never please everybody. But it is encouraging to report that the number of letters of appreciation we are now receiving shows a marked increase and it is particularly gratifying to mention that many come from visitors from abroad.

All fair-minded people will agree that these are not easy days for catering. Added to the shortages of most foodstuffs is the heavy price to be paid for them In pre-war days suppliers would chuckle with delight at the receipt of orders for thousands of chickens, tons of prime fish, hundredweights of meat, for eggs, cheese, jam, and all the other goods consumed. That is not the case today. We have to buy what we can and where we can. But notwithstanding all the problems and the difficulties, we can claim to have made some progress along the road to our goal which is to provide the travelling public with courteous service and the best food procurable.

Main Line Working in France

Class U.1. 4–6–4 locomotive hauling Paris-Lille express near St. Denis, French National Railways

Photo] *[Y. Broncard*

Signal Box at Agecroft Junction, L.M.R.

Plastics are used in the construction of the track diagram and lever handle covers

THE new signal box recently completed by the London Midland Region of British Railways at Agecroft Junction, Pendleton, contains several features of interest both from the architectural and signal engineering points of view. The use of slender steel columns to support the roof has permitted the incorporation of a continuous window, with little obstruction to vision, while the sliding windows run with easy and positive action on an overhead roller-bearing track. As can be seen from the photograph reproduced above a large canopy protects the signalmen from glare from the sun.

Heating is by means of a gas-fired central-heating boiler, thermostatically-controlled, while a toilet, cooker, sink and draining board, and locker are provided in an annexe.

Agecroft Junction box is a block post on the Manchester-Bolton main line at the junction of lines forming an alternative route to and from Manchester *via* Pendleton Broad Street Station. The working of the existing signals has been transferred to the new signal box, which, however, will also control the inlet and outlet of a set of three new sidings, laid in to serve the new Agecroft power station of the B.E.A.

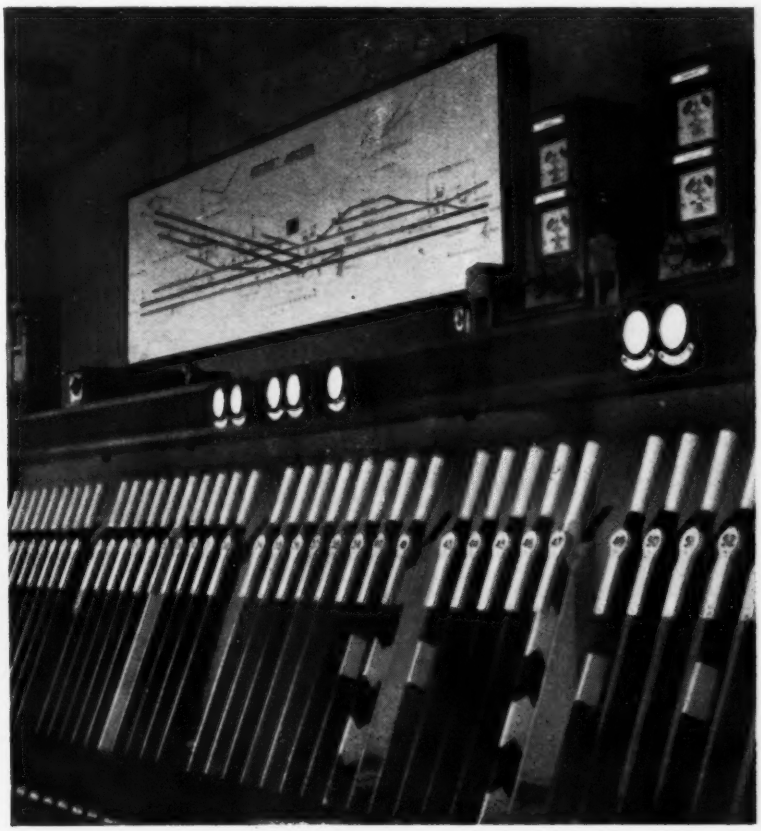
The new frame is positioned at the side of the signal box away from the running lines, so that the signalman will have an uninterrupted view of the latter, and it has 65 levers at 4½ in. centres. The frame is arranged for mounting directly on the operating floor, with separate counterbalance levers beneath, and the tappet interlocking is actuated by the catch handles. It replaced a former L. & Y. lever frame which was larger and of much heavier construction.

An interesting innovation has been the use of white plastic covers to the lever handles. These improve the signalman's grip, avoid the difficulty of keeping these handles clean, and at night show up any levers which are reversed and therefore partly obstruct the working space.

A further application of plastics is to be seen in the illuminated track diagram.

(*Continued on page* 465)

Signal lever handles fitted with plastic covers



Plastic material is also used in the construction of the illuminated track diagram at Agecroft

Sudan Railways Stores Department

Organisation of the four sections, machine accounting, and new main stores depot

Stores department headquarters building

THE Sudan Railways Stores Department is composed of four sections: Stores Headquarters; Main Stores, Atbara, which is the main railway stores depot; Steamer Stores, situated at Khartoum North Dockyard on the Blue Nile; and the Catering Stores, situated at the Headquarters of the Hotels & Catering Service Department at Khartoum Central.

Before March, 1949, the Stores Department Headquarters were situated at the Main Stores Depot, Atbara, in temporary buildings. In that year the headquarters were moved to a new building adjacent to the Sudan Railways main offices and approximately one mile from the Main Stores depot. The new office is of brick and reinforced concrete construction, with two storeys and basement. On the first floor are the offices of the Controller of Stores, Assistant Controllers, Chief Clerk, Registry Office, Staff Office, Typing Offices, Order Office, Invoice Office, Ledger Office, and the Chief Accountant's Accounts Section (Stores), and Statistical Office.

On the ground floor are the Machine Accounting Section, General Stores Inspectorate, Ticket Printing offices and the Traffic Department, Telegraph Office and Telegraph School. The basement contains the muniment room for storage of documents and the air-cleaning equipment for the machine accounting system; only this section of the building is air-conditioned.

Machine Accounting Section

The machine accounting section contains the machine room, card punching room, Superintendent's office, document reception office, clerks' office, ladies' rest room, card store, and the engineers' workshop. All the rooms are air-conditioned. This feature was considered advisable in view of the amount of dust and sand in the atmosphere during high winds and to Atbara being surrounded by desert.

The accounting machinery, which was installed by Power Samas Accounting Machines Limited, is of the 65-column type and consists of the following machines:—6 automatic card punch and verifying machines (AKP), 3 hand card punches, 1 auto verifier, 1 reproducer, 1 multi-field punch, 1 interpolator, 2 tabulators, 2 sorters, and 2 multipliers.

All documents, issue vouchers, orders, and invoices are sent to the machine accounting section after registration. Transaction cards are punched with the information contained in the documents, and are then verified and filed pending phasing. Each day a group of catalogue classes is phased, and all transaction cards in the file for these classes are sorted out and grouped under an individual catalogue number.

The issue, receipt, and opening balance cards, for each item are grouped together and tabulated and printed on the ledger cards, a new opening balance card for each item being made automatically.

The new balance cards are then passed through a multiplier, the stock on the card being multiplied by a reciprocal, which gives the stock in terms of months of supply, and also the net provision in months of supply. These cards are again sorted by means of a category code, and a list is tabulated showing the items requiring re-ordering or those where the stocks have fallen below the predetermined physical minimum, and on which action must be taken to expedite any orders which are outstanding.

When the issue cards have been tabulated on ledger cards, they are again sorted by job numbers and catalogue number, and a job costing tabulation is prepared for the Chief Accountant. Price-variance accounts are prepared monthly and show the variance between the actual cost of materials by sub-class and the fixed rate. A stock valuation tabulation is prepared monthly.

In addition to the above Stores Department functions, the machines will take over the revenue statistics for the Chief Accountant which is now carried out on 36-column machines. It is hoped to extend the machine accounting system at a later date to cover pay sheets, personnel, and general railway statistics.

On the night of October 5-6, 1948, a disastrous fire destroyed six store sheds

Card-punching room, machine accounting section

and the oil park at the Main Stores, Atbara. Consequently a new depot was built in 1949 on a new site covering an area of 198,335 sq. yd., of which 14,865 sq. ft. are covered, including timber-seasoning sheds with a floor area of 1,022 sq. yd. The new stores sheds are each 100 ft. × 40 ft., and are built of brick walls, concrete floors, and saw-tooth type roofs, consisting of asbestos-cement sheets resting on flat-bottom rails, carried by reinforced concrete beams with a span of 40 ft. and 4 ft. deep. One end of each beam rests directly on a wall, but at the other end two pieces of flat galvanised iron sheet with graphite grease between them are inserted between the beam and the other wall. This allows for expansion and contraction of the beam—amounting to as much as $\frac{3}{8}$ in.—without exerting any horizontal strain on the walls.

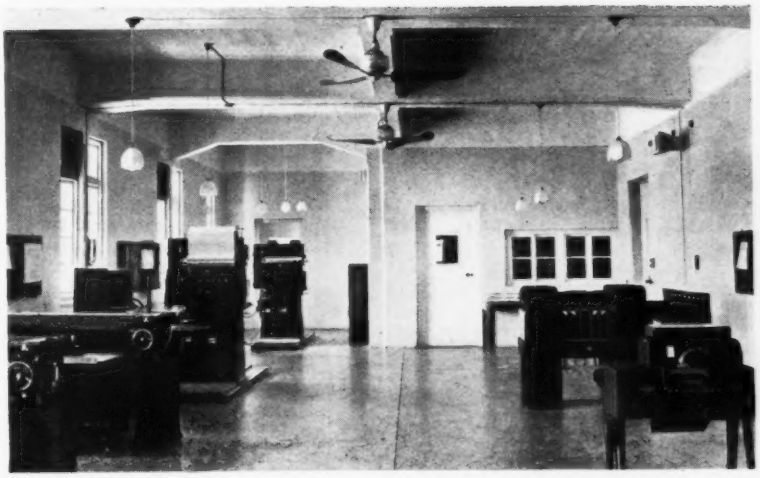
Within the depth of these beams, which are spaced 20 ft. apart, are fixed shallow north-light windows alternately fitted with glass and asbestos louvres. There are three of these bays of north-lighting in each shed. Direct rays of the sun are thus excluded, and there are no other windows in the walls. There are, however, inspection panels in the end walls covered with gauze to enable the night-watchmen to see any outbreak of fire that might occur. This design enabled reconstruction to be completed rapidly and provides cool and well-ventilated sheds.

Compressed-Gas Sheds

Special sheds were constructed for the storage of compressed gases and calcium carbide, each 10 ft. in width and from 10 ft. to 30 ft. in length. The walls are of brick, the floors are of concrete and the roof is built on the "jack-arch" principle carried on flat-bottomed rails. Ventilators are fitted at floor level and at roof level. The doors are of corrugated steel, opening outwards. These sheds also are extremely cool and well ventilated.

Oil stocks have been divided into three oil parks, with "bund" walls 2 ft. 6 in. high all round, and 8-ft. fire break walls at intervals.

The stores depot is patrolled night and day by railway police using the point-to-point time clock system. First-aid fire protection is provided outside each shed, with swivelling hose-reels for the vulnerable area, and an 8-in. dia. ring main is being installed with hydrants for dealing with major fires.



Part of machine room, machine accounting section

Interior of new shed showing centre bays of steel shelving, and roof lights

Signal Box at Agecroft Junction, L.M.R.

(*Concluded from page* 463)

This is one of a recently developed type. The diagram consists of a thin sheet of non-reflecting nylon-finish white plastic on which the track layout and symbols have been printed in black by a process similar to that normally used for the production of engineering drawings. The plastic is then mounted on plywood and edged with metal.

Such a diagram has good non-reflecting properties and is much more distinctive, being black and white, than the previous diagrams which had to be hand painted for equivalent results. The new diagram is also easier to clean, and, should the necessity arise, can be readily altered *in situ*. It is also cheaper and quicker to produce.

The plastic covers for the lever handles and the illuminated track diagram were made in the L.M.R. shops from material supplied by BX Plastics Limited.

For the track lamps polyvinylchloride lamp covers have been used so as to improve the angle at which these lamps can be seen.

CITY OF LONDON COLLEGE EVENING CLASSES.—The series of evening classes organised by the City of London College during the 1950-51 session include lectures on the economic, statistical, historical, and geographical aspects of transport, the law of inland and sea transport, and transport finance and accounting. The classes are for the purpose of preparing students for the examinations of the Institute of Transport at the graduateship and associateship stages. Particulars are available from the City of London College, Moorgate, London, E.C.2.

SPECIAL TRAIN FOR CONFERENCE.—In connection with a conference of home and overseas commercial delegates, of Hoover Limited, a special train was run by the Eastern Region of British Railways from Kings Cross to Harrogate on November 1. The train was provided with an engine headboard and carriage roofboards, bearing the name "The Hoover Limited." About 200 first class passengers travelled, including Sir Charles Colston, Chairman of the company.

British Railways Mixed-Traffic Diesel-Electric Locomotive

Intended for branch-line and local train service operating

A NEW 827-h.p. diesel-electric locomotive, No. 10800, which has recently been completed at the Glasgow works of the North British Locomotive Co. Ltd., is the latest addition to the ranks of diesel-electric power units for British Railways. The locomotive is intended for secondary purposes, such as the operation of branch-line and local train services, and will, together with the diesel-electric shunting and main-line locomotives already in service, enable diesel traction to be investigated over the whole range of railway working.

No. 10800 has been completed to the design and requirements of Mr. H. G. Ivatt, Chief Mechanical Engineer, London Midland Region, and is one of the projects sponsored by him and the former L.M.S.R.

Design Features

The mechanical structure was detailed by the North British Locomotive Co. Ltd., and the whole locomotive was built in its works at Glasgow, while the British Thomson-Houston Co. Ltd., Rugby, were the main contractors for the power equipment; the electrical generator, the traction motors and control apparatus were manufactured by them, and they were responsible for designing the characteristics of the power equipment to suit the varied duties to be performed. The diesel engine was provided by Davey, Paxman & Co. Ltd., Colchester.

The locomotive is a double bogie design and has nose suspended traction motors mounted on each axle and driving through single reduction gearing. The general layout of the power equipment is similar to the standard 350-h.p. diesel-electric shunting locomotives which have been so successfully operated for a number of years. A difference in this case, however, is the provision of a carriage warming boiler mounted in a separate compartment behind the driver's cab, and the re-positioning of the main fuel tank at the front of the locomotive with panel radiators on the bonnet sides, through which cooling air is drawn by a vertically disposed engine-driven fan.

The power equipment consists of a Davey Paxman 16-cylinder RPHXL engine rated at 827 b.h.p. at 1,250 r.p.m. coupled to a B.T.H. 6-pole 800 kW. generator with a continuous current rating of 1,600 amp. at 326 volts. The auxiliary generator and exciter are mounted above the main machine and are chain driven from an extension of the main generator armature shaft.

The main control gear is placed in a cabinet immediately in front of the driver's cab, which can only be opened by the master switch key, which, in turn, can only be withdrawn when the main circuit is isolated. The driver's cab has a centrally positioned control desk with all controls duplicated to permit driving from either side. A vernier control is included for precise regulation of locomotive speed during hump shunting or as required during normal operations. The control scheme allows for five engine speeds with load control provided to prevent overloading of the engine on all speeds except idling.

Compressed air is used for the operation of certain contactors, the sanders, the horn, and the re-fuelling equipment, but vacuum brakes are fitted to the locomotive, two 24-in. brake cylinders applying the brakes to all wheels through suitable linkage and slack adjusters. A deadman's pedal operating on the brake system is provided with a change-over cock to vary the action according to whether the locomotive is engaged on freight or passenger working.

The locomotive details follow a fairly conventional design, two four-wheel swing bolster bogies being used with S.K.F. spherical roller bearing axleboxes. Split two-bearing axleboxes are used of the standard S.K.F. pattern for mounting outside the wheels. They are fitted with manganese steel liners, and the bearings, which are mounted on withdrawal sleeves, are grease lubricated. A combination of coil and laminated springs is used for suspension. The bogies are

(*Continued on page* 470)

Mixed-traffic diesel-electric locomotive No. 10800

RAILWAY NEWS SECTION

PERSONAL

British Transport Commission

The Minister of Transport has announced that Lt.-Colonel S. J. L. Hardie, having been appointed by the Minister of Supply as Chairman of the Iron & Steel Corporation of Great Britain, has resigned his appointment as a part-time Member of the British Transport Commission.

Mr. S. B. Warder, M.I.Mech.E., M.I.E.E., M.I.Loco.E., Mechanical & Electrical Engineer, Southern Region, British Railways, who has been appointed Chief Officer (Electrical Engineering), Railway Executive, was born at Portsmouth in 1901, and was educated at Glasgow High School, and at the University of London. After he had served an apprenticeship with Johnson & Phillips Limited, he gained further experience with Ferguson Pailin Limited, and later as an engineer with the General Electric Co. Ltd. In 1927 he joined the Swedish General Electric Company (later Asea Electric Limited) as an engineer in the Export Department, and eventually succeeded to the position of Chief Engineer & Manager of that department, where he was actively associated with contracts for railways not only in this country but in many other parts of the world. He joined the Southern Railway in 1936, as Technical Assistant to the Electrical Engineer for New Works, and while in that position represented the railways on many Government technical committees. Mr. Warder was appointed New Works Assistant to the Chief Electrical Engineer in 1943, and was primarily concerned with the plans for the future development and reconstruction of the electrified system. In 1946 he was one of a delegation which visited North America to study and report on the development of diesel-electric traction and the possibility of its application in this country. He was appointed Assistant to the Chief Electrical Engineer in 1947, and Electrical Engineer, Southern Region, in January, 1948. Mr. Warder became Mechanical & Electrical Engineer, Southern Region, in October, 1949.

Elliott] [& Fry

Mr. S. B. Warder
Appointed Chief Officer (Electrical Engineering), Railway Executive

Mr. L. C. Gardner
Appointed Chief Mechanical Engineer, Gold Coast Railway

Transport Tribunal

The King has signified his intention of appointing Mr. Hubert Hull, C.B.E., to be a Member and the President of the Transport Tribunal from January 1, 1951, in succession to Sir William Bruce Thomas, K.C., whose appointment expires on December 31, 1950. Mr. Hubert Hull was called to the Bar, Inner Temple, in 1910, and is a Bencher; he was a member of the Royal Commission on the Press, 1947, and was made an Officer of the Order of Orange Nassau, 1949. He has been an Official Referee of the Supreme Court since 1949.

Mr. L. C. Gardner, A.M.I.Mech.E., A.M.I.Loco.E., formerly Engineer-in-Chief, Jamaica Government Railway, who, as recorded in our August 25 issue, has been appointed Chief Mechanical Engineer, Gold Coast Railway, was born in Jamaica in 1903, and was educated by private tuition and at Calaban High School, Jamaica. He received railway training with the United Railways of Havana, Cuba, and in 1929 he joined the Jamaica Government Railway, first serving in the drawing office, and subsequently on various civil and mechanical engineering projects. In 1942 he was appointed Works Manager and he became Chief Mechanical Engineer in 1945. At this time Mr. Gardner, in company with the General Manager, visited the United States and Canada for the purpose of acquiring railway equipment. He was awarded an honorarium for special development work carried out in the railway workshops. In 1946 the Civil and Mechanical branches were amalgamated under an Engineer-in-Chief, to which position Mr. Gardner was appointed in September of that year. Under his supervision a programme for the conversion of coal-fired locomotives to burn oil fuel was begun in 1946 and at present all locomotives in service have been so converted. He made a further visit to the United States in 1947 in connection with railcars. Mr. Gardner has served on various boards in Jamaica and is an Associate Member of the Institution of Mechanical Engineers and of the Institution of Locomotive Engineers.

Mr. R. F. Black

Appointed Assistant Chief Mechanical Engineer, New Zealand Railways

Mr. G. B. Gray

Appointed District Passenger Superintendent, Newcastle, North Eastern Region

Mr. C. F. Cleaver

Appointed Railcar Director, A.C.V. Sales Limited

Mr. R. F. Black, District Mechanical Engineer, Wellington, New Zealand Government Railways, who, as recorded in our August 11 issue, has been appointed Assistant Chief Mechanical Engineer, began his railway career at Wellington in 1924 as a mechanical engineering cadet. He was appointed Assistant Locomotive Engineer at Christchurch in 1932, and Locomotive Engineer (later District Mechanical Engineer) at Wellington in 1938. Mr. Black is a B.E. (Mech.), and is an Associate Member of the Institution of Electrical Engineers and the Institution of Mechanical Engineers.

We regret to record the death of Mr. Louis A. Ruff, Managing Director of Hugh Smith & Co. (Possil) Ltd.

Mr. G. B. Gray, Assistant District Goods Superintendent, Leeds, British Railways, North Eastern Region, who, as recorded in our September 22 issue, has been appointed District Passenger Superintendent, Newcastle, was educated at Leeds Grammar School and St. Catherine's College, Cambridge, and in 1932 he became a traffic apprentice on the L.N.E.R. He was appointed Assistant to District Manager, Peterborough, in 1935, and the following year he moved to the Office of the Chief General Manager, Kings Cross, as Assistant to the Industrial Agent. He became Assistant to District Manager, Nottingham, in 1937 and Assistant to District Goods & Docks Manager, West Hartlepool, in 1939; between 1941 and 1944 he was Acting Assistant District Goods Manager, Leeds. Mr. Gray was appointed Assistant District Goods & Passenger Manager, Lincoln, in 1944 and two years later he became Assistant District Goods Manager, Manchester. He returned to Leeds in 1948 as Assistant District Goods Manager, and became Acting District Passenger Manager, Leeds, in 1949; he was appointed Assistant District Goods Superintendent, Leeds, in April this year.

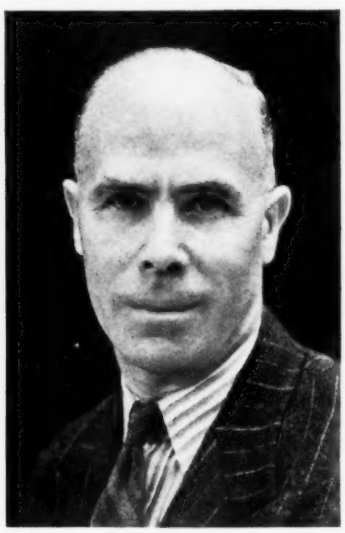
Mr. C. F. Cleaver, M.I.C.E., M.I.Mech.E., M.I.Loco.E., formerly Railcar Engineer, A.E.C. Limited, who has recently been appointed Railcar Director, A.C.V. Sales Limited, received his technical training at the Central Technical College. After gaining his Diploma (A.C.G.I.) in 1908, he joined the Associated Equipment Co. Ltd. (then the London General Omnibus Company) and subsequently played a part in the design of the "B" type bus. During the first World war he became a Lieutenant I.M.T., A.S.C., in 1914 and was demobilised as a Captain I.M.T. in the Royal Army Service Corps in 1919. Mr. Cleaver spent some time as Deputy C.I.M.T. with the British War Mission in the United States. He rejoined A.E.C. Limited in 1932 as Railcar Engineer

Mr. J. A. Addington

Appointed Assistant Superintent (Operating), East African Railways & Harbours

Mr. E. Morgan

Appointed Assistant Director of Research, Railway Executive Headquarters



Mr. J. W. Innes

Appointed Chief Draughtsman, Carriage & Wagon Engineer's Department, Western Region, Swindon

and, during the second World war, was chiefly employed in the design and development of armoured fighting vehicles. Mr. Cleaver has played a major part in the development of the A.E.C. diesel railcars used on the Western Region of British Railways and the Great Northern Railway (Ireland). The success which has attended the operation of the latter has been followed by the placing of a contract for units to be used on the Irish Transport Company's system.

Mr. G. H. Passey, who has recently been appointed Railcar Engineer to A.C.V. Sales Limited, was educated at Ross-on-Wye Grammar School. He served an indentured apprenticeship with A.E.C. Limited and received technical training at Southall Technical College from 1941-45. Mr. Passey has since been employed in the drawing office and experimental department of the company.

Mr. J. A. Addington, District Traffic Superintendent, East African Railways & Harbours, who, as recorded in our September 22 issue, has been appointed Assistant Superintendent (Operating), was educated at Downside School and Brasenose College, Oxford. After a course of two years training in the North Eastern Area of the L.N.E.R., he entered the service of the Kenya & Uganda Railways in 1941 as an Assistant Traffic Superintendent. He was appointed District Traffic Superintendent in 1947.

Mr. E. Morgan, B.Sc., Senior Research Engineer (Scientific Research), Derby, London Midland Region, who, as recorded in our September 22 issue, has been appointed Assistant Director of Research, Railway Executive Headquarters, joined the Research Department of the L.M.S.R. at Euston in the Engineering Section in 1933. He became deputy to Lighting & Heating Assistant in 1936, and Lighting & Heating Assistant to the Chief Civil Engineer in 1945. Mr. Morgan was appointed Senior Research Engineer, London Midland Region, in February of this year. He is Railway Executive representative on various British Standards Institution committees; British Railways representative on the National Illumination Council; Chairman of the informal sub-committee of the Railway Executive Civil Engineer's Committee on Lighting, Heating & Ventilation Matters, and a member of the Railway Executive Joint Policy Committee of the Civil & Mechanical Engineers. He has contributed articles to various scientific journals and takes a leading part in fuel conferences under the auspices of the Ministry of Fuel. Mr. Morgan graduated B.Sc. with first class honours in Mathematics at Sheffield University in 1928, and carried out research on fuel in conjunction with the Safety in Mines Research Board between 1928 and 1933, during which time he was Senior Research Fellow (1929-1932), and Robert Styring Research Fellow (1932-1933).

Mr. J. W. Innes, Assistant to the Chief Draughtsman, Carriage & Wagon Engineer's Department, British Railways, Western Region, Swindon, who has been appointed Chief Draughtsman in that Department, entered the service of the G.W.R. in 1917, as an apprentice to fitting and turning in the Carriage & Wagon Works at Swindon. During his apprenticeship Mr. Innes was awarded an Engineering Day Studentship and received his technical training at the College, Swindon; in 1924 he was prize winner in the final examination of the City & Guilds of London Institute, in railway carriage and wagon construction. Mr. Innes entered the drawing office at Swindon in 1922 and was continuously engaged on carriage and wagon design until 1942, when he was placed in charge of that section; he was appointed Assistant to the Chief Draughtsman in 1947. For many years Mr. Innes was a lecturer in the engineering department of the College, Swindon, and is at present the examiner of the City & Guilds of London Institute for railway carriage & wagon construction.

Lord Hurcomb, Chairman of the British Transport Commission, has accepted the Presidency of the Railway Convalescent Homes for the year 1951, in succession to Lord Latham, Chairman of London Transport Executive.

The Railway Executive has announced that Mr. R. G. Henbest, Estate & Rating Surveyor, Southern Region, has been appointed Estate & Rating Surveyor, Western Region, as from January 1, 1951, in succession to Mr. F. C. Hockridge, who is retiring on December 31.

The Railway Executive has announced the appointment of Mr. J. D. Swain of the Regional Treasurer's Office Paddington, as Regional Treasurer, Western Region, in succession to Mr. W. N. Connah.

Mr. B. H. Bristow, A.M.Inst.T., Assistant Welfare Officer, British Railways, Western Region, has been appointed Welfare Officer to that Region.

Mr. K. C. Banks and Mr. J. N. Compton, O.B.E., M.I.Mech.E., have been appointed Directors of the Yorkshire Engine Co. Ltd. Mr. Banks is the General Manager of the company, and Mr. Compton is the Director in charge of all technical matters, including the design of locomotives.

Sir George Clark, Bt., D.L., Joint Deputy Chairman, Great Northern Railway (Ireland), whose death, at the age of 68, we recorded briefly last week, was the son of the first baronet, Sir George Smith Clark, who was one of the founders of Workman, Clark & Company. He was educated at Rugby and Trinity College, Cambridge, where he took his M.A. Sir George Clark was co-opted to the board of the G.N.R.(I.) in 1934, on the resignation of his father, who had been Chairman of the company for 18 years; he became Deputy Chairman in 1939. He was appointed to the Belfast Harbour Board in 1935 and became Northern Ireland representative on the Irish Lights Commission in 1947. In 1940 Sir George Clark was High Sheriff of Antrim and he was High Sheriff of Down in the following year.

We regret to record the death at the age of 65 of Major-General A. C. Fewtrell, C.B., D.S.O., V.D., M.I.C.E., M.I.E. (Aust.), M.Inst.T., Chief Civil Engineer, New South Wales Government Railways. He began his career as a cadet in the mechanical branch of the Queensland Railways and subsequently joined the railway construction branch of the Public Works Department, New South Wales. His service with the New South Wales Government Railways began in 1908 as a draughtsman, and he was appointed Assistant Resident Engineer in 1911; two years later he became Resident Engineer. In 1915 he was mobilised to organise the first military engineering training depot for Australia and in 1916 he was selected by General Birdwood to organise and command the Anzac Light Railways and All Australian Railway Troops in France. He returned to New South Wales in 1918 and was appointed Divisional Engineer in 1920 and Supervising Engineer in 1926. He became Transport Commissioner (Way & Works Branch) in 1932 and Chief Civil Engineer later the same year. Among the major works carried out during his period of office were the construction of new lines, duplications and deviations, as well as power stations and various new bridges, including that over the Hawkesbury river. In 1941 he was selected as the first General Officer commanding the Lines of Communication of New South Wales. Major-General Fewtrell was awarded a Baker Gold Medal in 1949 for a paper to the Institution of Civil Engineers. He was President of the St. John Ambulance Association New South Wales Centre.

Mr. John Elliot, Chief Regional Officer, London Midland Region, recently held informal staff conferences at Preston and Carlisle.

We regret to record the death of Mr. R. B. Deeley, Director, Lightalloys, Limited.

We regret to record the death of Dr. T. Scoresby-Jackson, M.B., sometime Chief Medical Officer, Bombay, Baroda & Central Indian Railway.

Mr. John Vaughan, O.B.E., Director, Locomotive Manufacturers' Association, who was to have proceeded to India on November 16, has had to postpone his visit until the new year.

Mr. J. Whyte, Manager, Londonderry & Lough Swilly Railway, has been elected Chairman, General Managers' Conference, Irish Railway Clearing House, 1951.

Major E. C. Dunne, Works Engineer, Coras Iompair Eireann, has resigned to take up an appointment as Assistant Locomotive Superintendent with the Peruvian Railways.

We regret to record the death on November 5 of Mr. S. C. Bunn, M.I.Mech.E., M.I.E.E., Assistant Electrical Engineer, Lots Road, London Transport Executive.

Mr. T. D. Slattery, General Traffic Manager of Associated British & Irish Railways Incorporated, has recently returned to New York after a short business visit to Great Britain and Ireland.

Mr. N. L. Hudson, Fuel Oil Manager, Shell-Mex & B.P. Limited, has retired, and has been succeeded by Mr. H. Cunliffe, formerly Manager of the company's Birmingham Division.

We regret to record the death on October 30 of Mr. J. A. Dunnage, Director of Industrial Transport Publications Limited and Associate Editor of *Transport Management*. He was a Vice-President and founder-member of the Institute of Traffic Administration.

A commission of the board of the Peruvian Corporation, including Mr. W. H. White (Chairman), Colonel V. A. G. Cecil, Sir Donald McMullen, and Mr. F. F. Hixson, the Corporation's representative in Peru, recently visited the Hunslet Engine Co. Ltd. works at Leeds to inspect the first of three 500 h.p. diesel-mechanical locomotives intended for freight and passenger working.

The Central & Southern African Transport Conference

Discussion on transport co-ordination south of the Sahara and new outlets for Rhodesia

In his opening speech to the Central & Southern African Transport Conference, which, as recorded in our last issue, opened in Johannesburg on October 25, Dr. D. F. Malan, Prime Minister of the Union of South Africa, stated that as long as Central and Southern Africa lacked a co-ordinated and adequate system of communications, their resources could never be fully developed. Fortunately, they had already reached a large measure of agreement on plans for joint action. For this they were largely indebted to the Government of Portugal which had taken the initiative in calling a preliminary conference at Lisbon last year.

"The resources of Africa," said Dr. Malan, "have to be integrated with the economy of the world and among the states of Africa themselves. . . . . The financial burdens arising from the building of railway lines, harbours and roads will be immense but do not present insurmountable difficulties, especially as the wealth of Africa represents an attractive investment."

American Interest

Mr. W. Marshall Clark (South Africa), the Secretary-General of the Central & Southern Africa Interim Transport Organisation, said that America was interested in the development of transport in Africa largely through the Organisation for European Economic Co-operation. When O.E.E.C. began on the organisation of European economy, it was found that the economy of many European countries was linked with their African possessions and in that way America became interested. America had already given certain Marshall Aid to African territories, such as road-building machinery to Nyasaland, and projected railways between Kenya and Northern Rhodesia.

The Conference, which included more than one hundred delegates from Britain, France, Belgium, and Portugal, and their African territories, discussed improvements to the port of Beira and the Beira railway, following the inter-governmental agreement between Portugal, Britain, and Southern Rhodesia; the possibility of alternative railway routes from Rhodesia either to Lourenço Marques and other east coast ports by West Nicholson and Beit Bridge or through Kafue or to the west coast; the enlargement of the port of Dar-es-Salaam and a link from it to the eastern part of the Belgian Congo; the connection of the Rhodesian and East African railway systems for which a preliminary reconnaissance had been made; the extension of the Tanganyika railways to the new groundnut port of Twala; and parts of a ten-year plan for the development of the Belgian Congo which covers road, river, and rail transport development.

At its first meeting, Mr. P. O. Sauer, South African Minister of Transport, was elected president of the conference, and Mr. E. de Backer, leader of the Belgian delegation, was elected deputy-president. Mr. Sauer said that, realising the importance of the interim transport organisation recommended by the Lisbon conference, the Union Government had decided to place at its head one of its most able and experienced officers, Mr. W. Marshall Clark, at that time General Manager of the South African Railways. The Union delegation was led by Mr. W. Heckroodt, General Manager of the South African Railways. Committees were formed to study and report on various aspects of transport problems in Africa south of the Sahara.

Sir Evelyn Baring, leader of the British delegation, said that the transport problems of Africa required the setting up of a permanent organisation to encourage member governments to co-ordinate transport plans in the light of changing conditions. The British Government strongly considered that such a permanent organisation should be established. It could do much to prevent the emergence of the sort of problem which made the Johannesburg and previous conferences necessary, and would enable a lasting solution to the transport problems of Southern Africa to be achieved.

Mr. Heckroodt emphasised to the Economic Development Committee of the Conference the urgency of linking Beit Bridge with West Nicholson. He told the committee that the Mafeking-Bulawayo line, the only rail link between South Africa and Southern Rhodesia, had reached the limit of its carrying capacity under existing conditions and that another link between the Union railway system and the north was essential. The provision of water supplies for locomotives working on the existing line was becoming increasingly difficult.

The Union Government had already indicated its readiness to undertake improvements necessary on the Beit Bridge-Komatipoort line to cope with the volume of traffic that would be offered were the link with West Nicholson to be constructed. The advantages of closing this gap were that: (1) the distance between Johannesburg and Bulawayo would be reduced by 50 miles; (2) the port of Lourenço Marques would become available to both the Rhodesias; (3) any diversion of traffic from Beira to Lourenço Marques for Bulawayo and environs and Northern Rhodesia would relieve not only the port of Beira, but also the line east of Bulawayo; and (4) it would relieve the seriously congested Mafeking-Bulawayo route.

Southern Rhodesian Viewpoint

Southern Rhodesia asked the conference to defer discussion on the suggested railway between Beit Bridge and West Nicholson. Mr. G. A. Davenport, Minister for Mines and Transport for Southern Rhodesia and leader of the Southern Rhodesian delegation, said that at the Lisbon conference Southern Rhodesia was asked to proceed immediately with a railway connection to Lourenço Marques and prominence was given to the West Nicholson-Beit Bridge link as the quickest possible way of providing it. Southern Rhodesia was not satisfied, he said, that this would provide the solution to its difficulties and it was compelled to qualify its ratification of the final act of the Lisbon conference.

Mr. Davenport said that his Government had not assured itself which of three courses of action was most likely to be of the greatest economic advantage to the Central African territories both from the development aspect and from the point of view of the finances of the Rhodesia Railways. The three courses were: a connection from West Nicholson to Beit Bridge; a direct connection from the Rhodesian system to Lourenço Marques *via* Pafuri, Mapai, and Guija; and the doubling of the Beira line. The first, with a ruling gradient of 1 in 70 was not considered economic for a through main line, and would cost about £2,000,000. The second would open up new country in Southern Rhodesia and Portuguese East Africa and the gradients would be easy; the total cost would be about five to seven millions. The doubling of the Beira line had been suggested by an engineer of the Economic Co-Operation Administration after the Lisbon Conference, and should be studied in the light of the capacity of the port of Beira.

The Conference closed on November 17.

British Railways Mixed-Traffic Diesel-Electric Locomotive

(*Concluded from page* 466)

fitted with a spherical centre pivot which supports the weight of the locomotive and superstructure, and through which the tractive effort is passed. Side control pads are fitted to prevent undue oscillation of the main structure. The power equipment is mounted on a very rigid sub-frame resiliently mounted on the two longitudinal "I" section beams which form the main frame of the locomotive. From these beams suitable fabricated gussets support the combined platform and sealing plate which runs the full length and width of the locomotive.

The maximum design speed is 70 m.p.h., and the maximum tractive effort is 34,500 lb. with a continuous rating of 18,800 lb. at 12·3 m.p.h., with a wheel diameter of 3 ft. 6 in. Provision is made for propulsion starting of the main engine should the battery become discharged. A comprehensive series of trials is being planned so as to explore fully the possibilities of a locomotive of this type and power for the varied duties which could be allocated to it.

The principal dimensions of the locomotive are as follow:

Engine	Davy Paxman, type 16 RPH, 16-cylinder four-stroke vee-type Diesel, with turbo superchargers
Cylinders	827 h.p. at 1,250 r.p.m.
Dimensions of cylinders	7 in. bore × 7½ in. stroke
Gear ratio	16·15
Tank capacities:	
Engine fuel main	255 gals.
,, ,, service	75 ,,
Radiator, header, etc.	85 ,,
Heating boiler feed water	300 ,,
Heating boiler fuel oil	90 ,,
Tractive effort	34,500 lb.
Adhesion factor	4·53
Weight in working order	69 tons 16 cwt.
Radius of minimum curve	3½ chains
Brake, per cent. of engine weight:	
Vacuum	66 per cent.
Hand	29 ,,

NEW ROOF FOR CRICKLEWOOD ENGINE SHED.—A new concrete roof is now being erected on the London Midland Region motive power depot at Cricklewood. Pre-cast reinforced concrete will replace the existing timber and slate roof over the 180-ft. square shed which has a central turntable and 24 radial roads. The design provides for continuous smoke troughs of reinforced concrete, vented by circular uptakes, and the turntable area will be covered, using precast reinforced concrete bars down both sides of each track.

Parliamentary Notes

Government Controls

Mr. Peter Thorneycroft (Monmouth—C.) in his speech in the House of Commons on November 7, when he moved an amendment to the Address in reply to the King's Speech, censuring the Government for their intention to make controls permanent, said that in the matter of permits to road hauliers the British Transport Commission had abdicated its responsibilities, handing them over to the Road Haulage Executive. With the removal of all competition from independent hauliers, there was no limit at all to the amount to which the road rates of nationalised monopoly could be raised. The only solution might be the Transport Tribunal, but it had no jurisdiction.

Mr. Geoffrey Wilson (Truro—C.) referred to British Railways' staff transfers between distant parts of the country (with consequent housing difficulties) and to standardisation of practice (such as adoption of an average in signalling practice rather than of the best method) as evil consequences of the desire for "integration."

Lord Dunglass (Lanark—C.) said that nationalisation of transport had resulted in lack of personal relationship in staff matters, and the close connection between the trades unions and the transport chiefs prejudiced the position of the unions as representatives of transport employees.

Mr. Hugh Dalton (Minister of Town & Country Planning), replying for the Government, said that much was being made of the fact that a small number of the total of permits granted to private road hauliers were being terminated next February, as was always clear might be the case when the permits were originally granted. He went on to outline the methods by which those concerned could obtain redress. The obstacle in the way of efficient integrated transport was the excess of vehicles on the roads. Many of them were running only half-loaded; they were using petrol, and wearing out road surfaces, and increasing the number of road accidents; and they were uneconomic. It was the Government's policy to get rid of that redundancy.

On a division the Conservative amendment was defeated by 299 votes to 289.

Rail Charges in Northern Scotland

Mr. Alfred Barnes (Minister of Transport) recently received a deputation of Highland Members of Parliament on the subject of rail charges in the North of Scotland. The proposal made to the Minister was that he should make an experimental reduction of 50 per cent. in passenger fares and freight rates in the Highlands. In the White Paper "A Programme of Highland Development," transport was specifically recognised as "the crucial problem of the Highlands," and in existing conditions it was impossible to attract new industries; not one firm had come in since the Highland development area was created in 1949, and light industries begun since the war were in danger of closing because of the burden of freights, which greatly increased the price of essential commodities such as coal and building material. The rail journey from London to the Far North was long, and from Inverness to Wick the train averaged only 22 m.p.h. Although the number of tourists in the summer of 1950 had been a record, the railway got no benefit; the rise in rail traffic, the delegation maintained, was the result of the resumption of excursion fares.

It was pointed out by Mr. Barnes that the prices which the British Transport Commission had to pay for raw materials were still rising. He sympathised with the case the delegation had put forward, and promised to give his considered views later.

Scottish Branch-Line Services

Mr. D. J. Pryde (Midlothian & Peebles—Lab.), raised on October 19 the question of the railway services in Midlothian and Peebles, which were causing concern and much inconvenience; he detailed instances of recent withdrawal of passenger services, some of which he suggested were of tourist significance, and might have been made to pay, while some of the bus services substituted were inadequate. The authorities had not taken cognisance of the movement of population from west to east in Southern Scotland.

Mr. Alfred Barnes said that he would study these points. Many branch lines were affected by changed travelling habits. It was only when the lines became uneconomic and the railway administration decided to close them that they heard of the value of that form of communication. The Scottish Consultative Committee had been set up to deal with such problems, and this matter had been before that Committee, which had come to the conclusion that the decision of the British Transport Commission was justified.

Questions in Parliament

B.T.C. Accounts

Mr. K. W. M. Pickthorn (Carlton—C.) on November 6 asked the Minister of Transport, if he would direct that in future years the accounts of the Transport Commission should show how much profit or loss, after allowing for interest and central charges, the railways and road haulage respectively, made in the year covered by the Transport Commission's latest annual report, with comparative figures for earlier years.

Mr. Alfred Barnes stated in a written answer: No. For the reasons given in para. 54 of the report of the British Transport Commission for 1949, I do not consider it practicable to allocate the charges in the way suggested.

Festival of Britain Train Services

Mr. Gerald Williams (Tonbridge—C.) on October 17 asked the Lord President of the Council when he expected to announce the results of the consultations between the Festival of Britain Office and the Railway Executive regarding Festival train services.

The Lord President of the Council (Mr. Herbert Morrison): The Festival Office has explained to the Railway Executive the likely additional demands, and the Railway Executive is now making detailed arrangements which it will make known in due course.

Mr. Williams: Does not the Lord President realise that "in due course" is no use at all, because towns in the suburbs and around London are trying to make their arrangements with foreign travel agencies?

Mr. Hector Hughes (Aberdeen North—Lab.): Will the Lord President say what arrangements, if any, are being made to run excursion trains from distant places like the North of Scotland?

Mr. Leslie Hale (Oldham West—Lab.): Will the Lord President bear in mind that many clubs have to organise these excursions on the basis of weekly collected subscriptions? They would like to know at the earliest moment what the rates are likely to be and what the facilities are to be offered.

Mr. C. S. Taylor (Eastbourne—C.): Is the Lord President aware that a number of towns outside London wish to act as dormitory towns during the Festival period, and "in due course" is not sufficient to enable them to make arrangements?

Passenger Charges Schemes

Mr. Ronald Russell (Wembley South—C.) on October 23 asked the Minister of Transport if he would introduce amending legislation to confer on municipal boroughs and county district councils the right to lodge objections to passenger charges schemes.

Mr. Alfred Barnes: No. After experience with the London Area Passenger Scheme I consider the scope for lodging objections already sufficiently wide, and any extension would only lead to duplication and unnecessarily long proceedings.

Mr. Russell: Is the Minister aware that a county council might not wish to object to a scheme, but that some of the municipal boroughs or district councils within the county might wish to do so?

Mr. Barnes: If there was a sufficiently large body of opinion in any area I should have thought that the county council ought to voice those views. I am unable to concede the point, but there should be other facilities, and I will indicate to Mr. Russell what they are.

Travel Documents for Northern Ireland

Mr. A. C. Bossom (Maidstone—C.) on October 23 asked the Secretary of State for the Home Department how many men were employed and how much it cost to issue sailing permits and check passports for passengers between Great Britain and Northern Ireland; and why that was done in view of the fact that neither sailing permits, entry permits, nor passports were required for travel to Northern Ireland for British citizens.

Mr. Geoffrey de Freitas (Parliamentary Under-Secretary of State for the Home Department), in a written answer, stated: Sailing tickets are issued and checked by the shipping companies, to minimise inconvenience to passengers at periods when traffic is heavy, as part of the normal duties of shipping staff. It is necessary, in present circumstances, to control the movement of aliens travelling to or from Northern Ireland, and it follows that British subjects must establish their nationality. Precise figures of the cost of controlling alien travellers to or from Northern Ireland at ports in Great Britain are not available, but the cost of any adequate system of controlling movement of aliens across the border between Northern and Southern Ireland would be far greater.

Transferred Staff Superannuation

Mr. R. Assheton (Blackburn West—C.) on November 6 asked the Minister of Transport if he would make a statement regarding the Regulations to be issued under the Superannuation (Miscellaneous Provisions) Act, 1948, affecting the superannuation position of former employees of the railway companies who had transferred to the civil service.

Mr. Alfred Barnes (Minister of Transport) in a written answer stated: Regulations were made by the Treasury in September under the Superannuation (Miscellaneous Provisions) Act, 1948, providing in certain circumstances for pensionable service to be aggregated where an employee transfers from pensionable employment

with a public board to the civil service, or *vice versa*. These arrangements are, however, appropriate only where the pension scheme of the public board is broadly equivalent to that of the civil service. The superannuation funds of the former railway companies are not of this nature, and the Commission is therefore not included in the bodies to which the regulations apply. I am, however, informed that the Commission are considering, and will doubtless consult me later on the steps to be taken to meet the superannuation position of staff who transfer voluntarily to the civil service.

Railway Maintenance

Captain L. P. S. Orr (Down, South—C.) on October 25 asked the Minister of Transport whether he had listed those sections of the railways of the United Kingdom which he considered to be of strategic importance and whether he had consulted with the British Transport Commission and other authorities concerning the necessity of maintaining these sections.

Mr. Alfred Barnes, in a written answer, stated: The answer to both parts of the question is "No." The present state of maintenance of railways was fully referred to in the recent report of the British Transport Commission.

Transport of Groundnuts

Colonel A. D. Dodds-Parker (Banbury—C.) on October 18 asked the Secretary of State for the Colonies how many tons of groundnuts from the 1949 and 1950 crops were awaiting transport at railheads in Nigeria.

Mr. James Griffiths (Secretary of State for the Colonies): On October 5, 1950, none of the 1948-49 crop remained at railheads and the stocks of the 1949-50 crop awaiting transport amounted to less than 1,000 tons.

Mr. L. D. Gammans (Hornsey—C.): Is not the reason for the improvement in the transport situation due to the fact that the crop last year and this year is little more than half the average?

Mr. Griffiths did not reply.

Gloucester Railway Carriage & Wagon Co. Ltd.

The annual general meeting of the Gloucester Railway Carriage & Wagon Co. Ltd. was held at Gloucester on November 15. Sir Leslie Boyce, Chairman & Managing Director, presided, and first referred to the fact that Colonel C. P. Dawnay had been elected a director since last year.

Sir Leslie Boyce, dealing with the accounts, remarked that the trading profits of the group were £333,000, which was a record, and compared with £267,000 for the previous year. After deducting £111,000 for income tax and £47,000 for profits tax the net profit was £142,403.

The contribution of the parent company to the net profit amounted to £131,764 compared with £95,398 last year. Of this amount, £10,712 has been retained by the subsidiaries and added to their reserves, and £121,052 had been dealt with in the statement of accounts of the parent company.

This very satisfactory result had enabled the directors to recommend that the dividend be maintained at 15 per cent. for the year, that £50,000 be placed to revenue reserve and £20,000 to pensions reserve, and that the amount carried forward in the profit and loss account be increased from £15,217 to £22,956.

There had been a slight variation in the arrangement of the accounts this year. Instead of including future income tax in revenue reserve it was now shown under the heading of deferred liabilities. In the case of all companies in the group, the reserve for future income tax covered all tax accrued to April 5, 1952.

Excluding this item, the capital and reserves of the company amounted to £1,608,452, an increase of £112,000 on last year, while the corresponding figures in the consolidated balance sheet were £1,633,297 and £123,000 respectively. The true capital employed in the business was therefore more than three times the issued capital.

The increase in the profits was mainly due to the bold policy of expansion carried out since the war, as the result of which they had much greater productive capacity, and their works were among the most efficient of their kind.

Their subsidiaries, Gloucester Foundry Limited and Hatherley Works Limited, together with their associate, Wagon Repairs Limited, had each completed another successful year. During the period the company acquired the whole of the share capital of Wm. Gardner & Sons (Gloucester) Ltd. This new subsidiary had shown very good profits in the short period it had been in the group.

The financial position of the company was stronger than ever. The fixed assets had been well written down, stock in trade and work in progress had been conservatively estimated, and the market value of quoted trade investment was considerably in excess of the book value. The order book was in a healthy condition and they had a very busy time ahead of them.

The report and accounts were adopted and at the extraordinary general meeting which followed the capital reconstruction scheme was also approved and adopted.

Institution of Railway Signal Engineers

Signalling developments on the Bombay, Baroda & Central India Railway

At the opening meeting of the 1950-51 session of the Institution of Railway Signal Engineers in London on October 11, with Mr. F. Horler, President, in the chair, Mr. H. C. Towers, Deputy Chief Engineer (Signals), of the Bombay Baroda & Central India Railway, and first Chairman of the Institution's Indian Section, read a paper on signalling developments on the B.B. & C.I.R.

The paper commenced with some historical details and then described methods used to give additional protection at some 187 interlocked level crossings, with an interesting form of "last vehicle detector," which had saved much time on sections where special precautions were necessary to guard following trains from freight train breakaways. A brief description of the railway's telecommunications system was provided and a detailed account of the development of the signalling on the electrified sections leading from Bombay. References to the railway's wireless and telegraph network, to experiments with automatic train control and the organisation of the Signal Department were given in conclusion.

The discussion was opened by Mr. S. Williams, who remarked that the signalling on the B.B. & C.I.R. had been ably designed to cope with local conditions; simplicity had been the key-note and complications had only been adopted when justified and necessary. The level-crossing apparatus was interesting, but he thought that reliance on a single bell and relay was open to question.

Mr. H. H. Dyer gave some additional details of the trials now being conducted by the Railway Executive with a system of automatic train control which made use of the track inductor equipment of the Hudd system. This had been in use between London and Southend for some 15 years, though not officially all the time, and like the engine receiver apparatus, it had proved satisfactory. They had now combined with it the Western Region type of cab equipment and brake application arrangements. The chief difference was that the engine receiver no longer had a pneumatic, but an electrical function, and by the use of a slow release and other relays the bell and siren signals and brake application, so long used on the Western Region, were produced by passing over track inductors, as used on the Southend line of the Eastern Region.

The circuits of this new combination equipment were very simple and trials with it were now proceeding. It had been considered desirable to have an inductive system and eliminate all actual contact between the apparatus on the track and that carried on the train. The form of magneto-inductive transmission used in the Hudd system had proved to be perfectly reliable.

Mr. H. E. Cox spoke of the use of steel sleepers in India. Very often, but for them, their problems could have been solved by the use of track circuit. The G.I.P.R. had all along adopted the practice of using apparatus cases and cubicles to hold a number of relays and other items of equipment and the practice, apparently once used on the B.B.C.I.R., of having a separate cast-iron case for each relay alongside the track had never been seen on his own railway.

After Mr. Towers had replied to the various points raised, the President moved a vote of thanks to him for his paper.

G.E.C. Progress in 1950

In the course of his speech at the annual general meeting of the General Electric Co. Ltd. Sir Harry Railing, Chairman, said that the net profit of the Company last year was higher than in the previous year, due largely to an increase both in production and sales of about 11 per cent. After providing £932,000 for depreciation, £104,000 more than last year, and other provisions, there was a profit of £4,471,000. Taxation absorbed £2,731,000, or 61 per cent., which was a crippling amount. The comparative figure in the United States would have been 40 per cent.

The increased output achieved in the year under review was largely the result of ploughing back profits, a policy that had been applied for plant modernisation which had enabled them to obtain greater production both per employee and per unit of production space.

Sir Harry Railing emphasised that, for the second year, the Company had ex-

ceeded the export target set for it by the Government in spite of all the difficulties caused by increased local manufacture abroad and the restrictive influence of import licences on consumer goods. Exports constituted a record in value.

Closer Working of Rail and Road Services

Divisional and district boundaries

As part of its policy of closer working of road and rail services, the British Transport Commission is now taking steps to bring the boundaries of the road districts into closer conformity with railway districts. Certain adjustments in the boundaries of the divisions and districts of the Road Haulage Executive took place on November 5, bringing road and rail commercial areas into line to simplify issues of management, control, and liaison between the two forms of transport.

The major changes made on November 5 were the taking over by the Lancaster R.H.E. District of the north western part of the West Riding District up to and including Skipton; the Shropshire & Staffordshire District (to be known as the Staffordshire District) has absorbed the former Stoke District; in the Western Division a new Shrewsbury R.H.E. District has been formed covering approximately the counties of Shropshire, Merioneth, Montgomery, Radnor, and Hereford; the Oxford district is transferred to the Western Division and will also include a part of Gloucestershire; the Sheffield District now extends southward to include Newark-on-Trent; the Leicester and Northants District takes in a part of Bedfordshire, including Bedford, Luton, and Leighton Buzzard.

There are no adjustments in the Scottish Division, and in the South Eastern Division the only alteration is in the north eastern boundary which will follow the line of the River Blackwater.

Debating Societies Visit to Southern Region

A party of 60 members of the North Eastern Federation of Lecture & Debating Societies, comprised of members of all departments and grades, arrived at Kings Cross from York, Hull, Leeds, Darlington, and Newcastle on October 27, on a visit to the Southern Region Debating Society.

The party was escorted to London Bridge, where it was shown the business period operation of London Bridge Station between 4.45 and 5.30 p.m., under the guidance of members of the Southern Society.

At the evening debate between the two Societies, Mr. C. P. Hopkins, President of the Southern Society and Chief Regional Officer, presided, and welcomed members of the North Eastern Federation to London. He introduced Mr. L. Ballan, District Commercial Superintendent, Hull, who proposed the motion "That under present operating conditions the running of luxury trains is undesirable." On being put to the vote, the motion was carried by 65 votes to 55.

After the debate the party was entertained to dinner by the Southern Region at Waterloo; Mr. C. P. Hopkins presided, and was supported by Mr. S. W. Smart, Superintendent of Operation, by Messrs. H. E. Smith and H. N. Greenleaf, the North Eastern and Southern Regional Magazine Editors, and by the Chief Officers of the Southern Society.

On Saturday, October 28, the party split into two halves, one of which visited Clapham Junction Signal Training School, the Wimbledon flyover and Waterloo Station. The other party proceeded *via* London Bridge and East Croydon to Three Bridges, where the party visited the Electrical Control Room. The party then returned to Redhill and inspected the recently rebuilt Divisional Train Control Office.

Staff & Labour Matters

Railway Wages

A further meeting of the Railway Staff National Council, at which the three railway unions' claims were considered, took place on November 21; no agreement was reached, and the meeting was adjourned until the following day.

London Transport Gangers' Pay

The N.U.R. executive committee decided on November 3 to accept the London Transport Executive proposals for wage increases for gangers. The decision affects 300-400 gangers, who, because permanent-way labourers received a wage increase of 2s. 6d., claimed a similar increase to maintain their differential for added responsibility. The gangers had decided not to accept their additional responsibilities unless they received the increase. Earlier in the week, some gangers and sub-gangers adopted go-slow working. The N.U.R. instructed its members to resume normal working, which was re-established by November 7.

London Bus Wage Claim

The T. & G.W.U. is expected to prepare a wage claim shortly for London Transport bus, tram, and trolleybus employees. Claims were submitted recently for wage increases for similar workers outside London, but London Transport employees were not included because their sick pay was under negotiation. An arbitration tribunal under the chairmanship of Sir John Forster has rejected the sick pay scheme, and London busmen's wages are to be reviewed by the union.

Engineers' Wage Claim

The National Arbitration Tribunal, which on November 6 heard the C.S.E.U. claim for an all-round pay increase, has advised the employers and unions concerned to settle their dispute by negotiation. In doing so it has suggested a basis for settlement and recommends the following increases: Up to 11s. a week for skilled workers, with a maximum basic time rate of 128s. 2d.; and up to 8s. a week for unskilled workers, with a maximum basic time rate of 106s. If agreement is not reached, the Tribunal will make its own award, but if the parties come to terms, the Tribunal is prepared to make an award operative from November 13. The General Council of the C.S.E.U. met on November 15 when it decided on an early meeting with the Engineering & Allied Employers' National Federation to discuss these proposals.

GIANTS CAUSEWAY TRAMWAY.—The Government of Northern Ireland has announced its refusal to assist the Giants Causeway Tramway Company or any other body to enable the tramway to be kept in existence. Its opening next summer therefore seems unlikely.

Contracts and Tenders

The Nyasaland Railways have recently placed an order with the Drewry Car Co. Ltd. for two diesel-electric single railcars fitted with Fiat engines, under the inspection of the consulting engineers, Messrs. Livesey & Henderson.

The following orders have been placed for the Ceylon Government Railway by the Crown Agents for the Colonies:—

Gloucester Railway Carriage & Wagon Co. Ltd.: Eight carriage underframes and bogies for six workmen's travelling vans and two passenger brake vans, the bodies of which are being built in Ceylon.

The Crown Agents for the Colonies have recently placed the following orders for the East African Railways & Harbours, Tanganyika Section:—

Metropolitan Cammell Carriage & Wagon Co. Ltd.: 6 bogie high-side wagons; 6 bogie low-side wagons.

The Government of Pakistan has placed the following contracts in Japan for the North Western Railway:—

154 broad-gauge oil tank wagons; 10 broad-gauge diesel rail cars.

KYOTO STATION DESTROYED BY FIRE.—On November 18 fire destroyed the station at Kyoto, the third largest city in Japan. Damage was estimated at £200,000.

BROOM & WADE LIMITED.—Ordinary stockholders of Broom & Wade Limited have been offered 500,000 ordinary shares of 5s. each at 9s. 6d. a share in the proportion of one new share for every four stock units held. The consent of the Capital Issues Committee has been obtained.

NITRATE RAILWAYS.—The report for the year ended December 31, 1949, of the Nitrate Railways Co. Ltd. shows a surplus of £25,638. This, with 1948 balance brought forward, makes £65,378, of which it is proposed to appropriate £19,923 for 1¼ per cent. dividend (less tax), leaving £45,455 to be carried forward. The traffic arrangement with the Tarapaca & Antofagasta Nitrate Company expired in July, 1950. As the Nitrate Company handed its nitrate products to the Iquique-Pintados Railway, the Nitrate Railways were deprived of nearly all their traffic; as recorded in a previous issue of *The Railway Gazette*, the Company ceased operation on August 31, whereupon the Chilean Government appointed an interventor to work the line.

ALDERSHOT & DISTRICT TRACTION CO. LTD.—At the annual general meeting of the Aldershot & District Traction Co. Ltd., Mr. W. T. James, Chairman, said that the continued rise in operating expenses was causing the company serious concern. Although a year ago there had been hope that this process was coming to an end but the Government's action on devaluation and the doubling of the tax on petrol and fuel oil had damped these hopes. The new petrol and fuel oil tax increased their annual bill by £43,000, and had made certain changes in fares inevitable, and application had, therefore, been made to abolish return fares up to 1s. 6d. At the same time they had sought to economise by the withdrawal or adjustment of unremunerative services; no less than 66⅔ per cent. of the stage carriage services were now being run at below cost. So far as the current year was concerned he regretted the way that revenue, which was down in the year under review by £12,000, showed no signs of recovery.

Notes and News

Vacancy for an Assistant Locomotive Superintendent in Nigeria.—Applications are invited for the post of assistant locomotive superintendent on the Nigeria Railway. Candidates must be under 40 years of age. See Official Notices on page 475.

Senior Designer Required.—A senior designer is required by British Insulated Callender's Cables Limited at its Prescot Works, for the electro-mechanical design of overhead equipment for trolleybus and railway equipment. See Official Notices on page 475.

Institute of Transport, Metropolitan Section.—Mr. A. C. B. Pickford will read a paper on "Palletisation in Transport" before the Metropolitan Section of the Institute of Transport, 80, Portland Place, London, W.1, at 5.30 for 6 p.m. on December 4.

Railway Students Association Annual Dinner.—The annual dinner and dance of the Railway Students Association, London School of Economics & Political Science, will be held at the London Transport Executive Dining Club, South Kensington, on December 1. The dinner will be preceded by a reception by Mr. John Elliot, President of the Society, at 6.15 p.m.

Great Western Railway (London) Dramatic Society.—On November 17 and 18 the Great Western Railway (London) Dramatic Society presented "Pride and Prejudice" at the Fortune Theatre, London, W.C.2. The Society has well earned a high reputation for the excellence of its productions since 1922, and the performance last week in every way lived up to the best expectations of the many who have become regular members of its audience. The production was skilfully handled under the direction of Mr. Arthur Clapp, the newly-appointed producer, whose first full-length production for the Society it was. He proved himself an admirable successor to Mr. Percy Grumbridge, his predecessor, who produced some fifty plays for the Society. The large cast of twenty-two worked smoothly together to provide a most enjoyable evening's entertainment.

Norwegian Express in Collision.—Twelve passengers are reported to have been killed and about 50 injured when an express from Kristiansand to Oslo ran into a wagon loaded with timber near Hjukseboe on November 15. The wagon had broken loose from a goods train shunting at the station, and the collision wrecked the front coach of the express which contained 20 passengers.

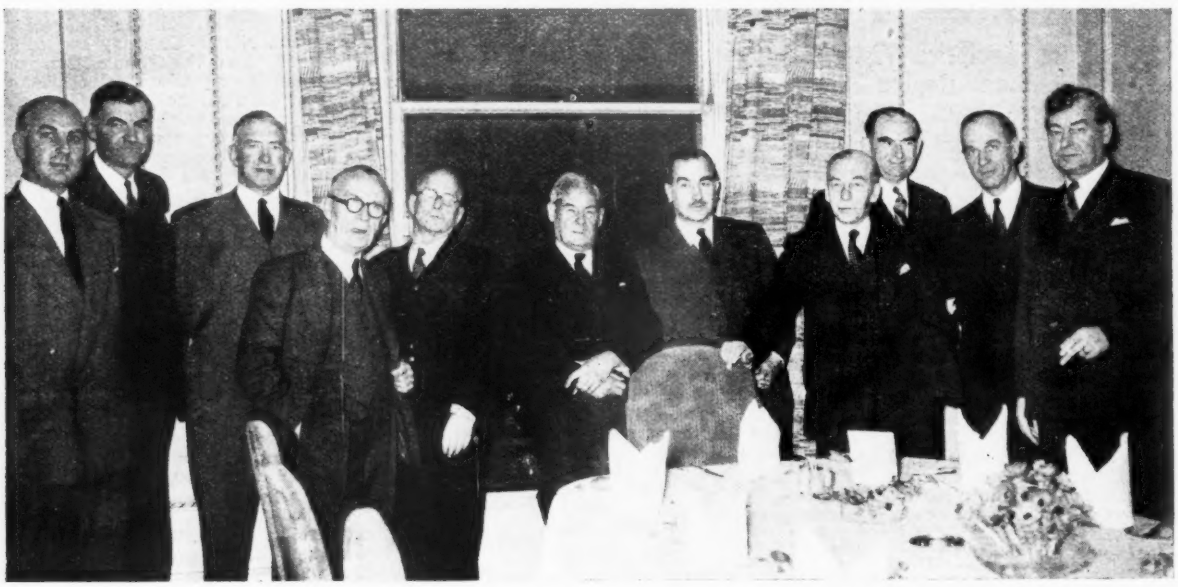
Milk in Bulk from Ireland.—To relieve the milk shortage in England a total of 750,000 gal. of milk from Northern Ireland was conveyed *via* Stranraer and Larne during the five weeks ended October 17. Almost the whole of this amount was shipped by the *Princess Victoria* which from September 12 operated a special schedule of sailings between the two ports. The milk was mainly for London and was transported in road and rail tank wagons.

Centralised Motorcar Booking Facilities.—Early next year British Railways are establishing in their Paris office, 12, Boulevard de la Madeleine, a special bureau to enable visitors from abroad wishing to bring their cars to England to book their journeys both ways at the time of their forward booking. Although, for some time, motorists from Great Britain going to France have been able to reserve space for both outward and return journeys at the same time, motorists in London whose journeys originate on the Continent have had to book their return after arrival in this country. Swiss motorists will be able to book their cars at the Basle office, British Railways, 9, Centralbahnplatz.

New-Named Train Posters.—The Railway Executive has recently issued two service posters in connection with the new-named trains running between London and Birmingham. The posters advertise the "Inter-City" which is running between Paddington, Birmingham (Snow-Hill), and Wolverhampton, and the "Midlander," which runs between Euston, Birmingham (New-Street), and Wolverhampton (High Level). Both posters are black line drawings in the wood cut style, similar to the previously issued posters showing the "Mid-Day Scot," "Capitals Limited," and "Flying Scotsman."

Port of Bristol Film—A 16-mm. sound and colour film "The Port of Bristol" has been produced by F. G. Warne Limited, Bristol, on behalf of the Port of Bristol Authority. With a running time of 45 min., it publicises the facilities offered by the Bristol City, Avonmouth, and Portishead Docks for quick turnround of shipping and efficient handling of imports, including wines, grain, refrigerated meat, petroleum, tobacco, and bananas, and also of motorcars, machinery, and other exports. The film illustrates mechanical handling gear in use, such as straddle timber conveyors, with shots of the Port Authority railway, with its 20 locomotives, 1,000 wagons, and 100 miles of track. It is to be distributed throughout the United Kingdom and

Lord Hurcomb's Tour in Yorkshire



At the British Transport Commission Luncheon, on November 10, at the Royal Station Hotel, Hull

Left to right: Messrs. J. E. Rayson, District Road Haulage Manager, York; L. M. Sayers, District Operating Superintendent, Hull (Railway Executive); N. C. McPherson, Divisional Road Haulage Manager, N.E. Division; J. D. Horgan, Docks Manager, Hull; C. H. Nicholson, Docks Mechanical Engineer, Humber Ports; Lord Hurcomb, Chairman, B.T.C.; Messrs. S. A. Finnis, Chief Docks Manager, Humber Ports; W. MacKenzie, Chief Engineer for Docks, Humber Ports; H. A. Short, Chief Regional Officer, N.E. Region (Railway Executive); T. V. Nicholson, Assistant Chief Docks Manager, Humber Ports; J. H. Brebner, Chief Public Relations and Publicity Officer, B.T.C.

OFFICIAL NOTICES

SITUATION VACANT. ENGINEERING ASSISTANT, Permanent Way Department, Central Railway, Peru. Salary from £1,000 per annum. Knowledge of Spanish essential. Apply to Secretary, THE PERUVIAN CORPORATION, LIMITED, 144, Leadenhall Street, London, E.C.3.

RAILWAY MAINTENANCE PROBLEMS. By H. A. Hull (late District Engineer, L.M.S.R.). Valuable information. With much sound advice upon the upkeep of permanent way. Cloth. 8½ in. by 5½ in. 82 pp. Diagrams. 5s. By post 5s. 3d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

DIRECTORY OF RAILWAY OFFICIALS & YEAR BOOK. A useful reference book for railway officers, engineering firms, and all who do business with railways. The only Directory which enables one to find the right railway and the right officer at the right moment. Issued July each year. Price 30s. net. Tothill Press Limited, 33, Tothill Street, London, S.W.1.

INTERNATIONAL RAILWAY ASSOCIATIONS. Notes on the work of the various associations concerned with International traffic, principally on the European Continent. 2s. By post 2s. 2d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

His Majesty's Colonial Service

A VACANCY exists for Assistant Locomotive Superintendent on the Nigerian Railways. The post is permanent and pensionable but on agreement in the first instance. The salary scale is £720 per annum for three years to £1,300 per annum. The point of entry will depend on war service, qualifications and experience. In addition a cost-of-living allowance of £57 to £100 per annum is payable. Candidates must be under 40 years of age and should have passed the examination for Associate Membership of the Institution of Mechanical Engineers or have passed sections "A" and "B" of the Institution of Mechanical Engineers examinations. They must have served an apprenticeship with a United Kingdom railway in a locomotive repair workshop and and thereafter have had footplate and running shed experience and at least two years administrative duties in a locomotive running department. Drawing office experience would be an advantage. Partly furnished quarters are provided at a rent of £60 to £90 per annum according to salary. Free passages are provided for the officer and wife, if married, and children up to three in number under nine years of age, on first appointment and on leave. Income tax is at local rates, which are much lower than those in the United Kingdom. Leave on full salary is granted after normal tours of 18 months at the rate of seven days for each completed month of residential service. Free medical attention. Outfit allowance of from £30 to £60 depending on salary. Candidates should write at once for a form of application and further particulars to the DIRECTOR OF RECRUITMENT (COLONIAL SERVICE), Colonial Office, Sanctuary Buildings, Great Smith Street, London, S.W.1, quoting reference No. 27325/11.

SENIOR DESIGNER required by British Insulated Callender's Cables Limited at their Prescot Works for the electro-mechanical design of overhead equipment for trolleybus and railway traction. Permanent position with superannuation and bonus schemes after twelve months' probationary service. Salary £650 per annum. Applications giving details of qualifications and experience should be made in writing to the STAFF OFFICER, B.I.C.C. LIMITED, Prescot, Lancs.

TRANSPORT ADMINISTRATION IN TROPICAL DEPENDENCIES. By George V. O. Bulkeley, C.B.E., M.I.Mech.E. With chapters on Finance, Accounting and Statistical Method. In collaboration with Ernest J. Smith, F.C.I.S., formerly Chief Accountant, Nigerian Government Railway. 190 pages Medium 8vo. Full cloth. Price 20s. By post 20s. 6d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

RAILWAY SIGNALLING AND COMMUNICATIONS INSTALLATION AND MAINTENANCE. A practical guide, especially intended to help Signal Inspectors, Installers, Fitters, Linesmen, Draughtsmen, and all concerned with installing and maintaining Signal, Telegraph, and Telephone Equipment. 416 pp. Many illustrations. Cloth. 8s. By post 8s. 6d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

British Commonwealth, and copies are available for loan from the Port of Bristol Authority.

Transport (Amendment) Bill.—After the debate on the second reading of the Transport (Amendment) Bill in the House of Lords on November 21, there was a majority of 33 against the Government. Editorial reference to this private member's bill was made in our November 3, 10, & 17 issue.

Paris Suburban Electric Accident.—Two passengers were killed and 50 injured when an electric train from Paris St. Lazare to Versailles Rive Droite on November 14 ran into a coach which had overturned on an adjacent line outside Montreuil. The coach formed part of a train which was being stabled for the night.

L.M.R. Route Diagrams Standardised.—The London Midland Region has standardised the route diagrams in its electric suburban stock operating on the following routes: Manchester-Altrincham; Mersey and Wirral; Liverpool-Southport; and Euston and Broad Street to Watford and Richmond. In addition a similar type of diagram has been produced for the Manchester, Bury, and Holcombe Brook trains, which have not previously carried maps.

British Standards Institution: Manchester Office Opened.—The British Standards Institution has opened a branch office at 12, Hilton Street, Manchester, 1, where a complete set of British Standards, some 1,600 in number, may be consulted and copies purchased. Any information about the B.S.I. can be obtained from Mr. A. F. B. Nall, an Assistant Technical Director of the Institution, who is in charge of the new office. The telephone number is Central 4856.

Compensation to Haulage Firm Increased.—On November 17 the Transport Arbitration Tribunal awarded Arthur J. Maggs Limited, coal merchants, Bristol, £6,950 more than the compensation assessed by the Road Haulage Executive for cessation of the haulage business and severance, bringing the total compensation payable to £35,127. The case was said to be the first of its kind under the Transport Act, 1947. The firm claimed £19,380 for cessation, against £4,155 assessed compensation, £856 for apportionment, as assessed and £1,000 for severance. The tribunal awarded £10,450 for cessation and £655 for severance and confirmed the executive assessment of £585 for apportionment

Southern Region Lecture & Debating Society.—Mr. C. Grasemann, Public Relations & Publicity Officer, Southern Region, British Railways, was in the chair at a meeting of British Railways, Southern Region, Lecture & Debating Society, held at the Chapter House, London Bridge, on October 25, when Mr. A. E. Grinyer, of the Canadian Pacific Railway Department of Public Relations, presented a pro-

Princess Elizabeth at Swindon Works

Princess Elizabeth accompanied by Mr. K. W. C. Grand, Chief Regional Officer, Western Region, and Mr. W. N. Pellow, Motive Power Superintendent, Western Region, on the footplate of the locomotive, "Princess Elizabeth," during her visit to Swindon Works on November 15 (*see our last week's issue, page 446*)

gramme of C.P.R. films. The films are intended, for showing to the public and opened with "Across Canada," a description of a transcontinental journey, and "Land of the Ski Hawks," which deals with winter sports around Quebec. The tourist attractions of the Rocky Mountains were depicted in "Shining Mountains" and the programme closed with "Happy Voyage," an account of an Atlantic crossing by Canadian Pacific steamship and a review of some travel attractions of Great Britain.

Festiniog Railway Abandonment.—At a recent meeting of the Festiniog Railway Company it was decided to apply to the Ministry of Transport to abandon the railway. An offer is understood to have been received for track, rolling stock and machinery as scrap.

London Midland Region Horse Traffic Withdrawn.—When, on November 18, the last of the stud at St. Pancras Goods Depot, London Midland Region, which previously exceeded 500 horses, were withdrawn and substituted by road motors, the half-way stage in the planned mechanisation of the whole of the London Midland goods depots in London, begun in June, 1949, was reached. Mechanisation of Camden and Broad Street depots is proceeding, and by June, 1951, it is hoped that all horses will have been withdrawn.

Forthcoming Meetings

November 28 (*Tue.*).—Institution of Civil Engineers, Great George Street, Westminster, London, S.W.1, at 5.30 p.m. "Part Reconstruction of Bo-Peep Tunnel at St. Leonards-on-Sea," by Mr. F. E. Campion, M.I.C.E. "Arley Tunnel: Remedial Works Following Subsidence," by Mr. C. W. King, A.M.I.C.E.

November 29 (*Wed.*).—British Railways, Southern Region, Lecture & Debating Society, at the Chapter House, St. Thomas' Street, London Bridge, S.E.1, at 5.45 p.m. "Joint Railway and Resort Publicity," by Mr. C. Grasemann, Public Relations & Publicity Officer, Southern Region.

November 30 (*Thu.*).—British Railways, Western Region, London Lecture & Debating Society, at the Headquarters Staff Dining Club, Bishop's Bridge Road, Paddington, W.2, at 5.45 p.m. "Men and Ideas," by Dr. H. E. Merritt, M.B.E., Chief Research Officer, British Transport Commission.

December 1 (*Fri.*).—Institution of Mechanical Engineers, Storey's Gate, St. James's Park, London, S.W.1, at 5.30 p.m. "Manufacture of Experimental Gas Turbines," by Mr. L. H. L. Leedham, M.I.Mech.E.

December 1 (*Fri.*).—Railway Students' Association, London School of Economics & Political Science, Annual Dinner & Dance at the London Transport Executive Dining Club, South Kensington, at 6.15 p.m. for 6.45 p.m.

December 1 (*Fri.*).—Railway Club, 57, Fetter Lane, London, E.C.4, at 7 p.m. "The Burma Railways," by Mr. J. H. P. Hawtrey.

December 1 (*Fri.*).—Scottish Society of Students of the Locomotive, in the Board Room, 302, Buchanan Street, Glasgow, at 7.30 p.m. "The Electric Locomotives of the Swiss Federal Railways," by Mr. F. A. Plant.

December 2 (*Sat.*).—Electric Railway Society, at the Fred Tallant Hall, Drummond Street, London, N.W.1, at 3 p.m. Annual General Meeting

Railway Stock Market

The higher level of activity in stock markets has been well maintained, helped by a rally in British Funds and broadening interest in the industrial sections, where a number of moderate dividend increases attracted buyers. One of the main topics of discussion is the question of dividend policy. Although most companies agreed to dividend moderation as requested by Sir Stafford Cripps, small increases are not out of line with this, particularly when profits have increased. Moreover, with higher taxation in prospect and the effect of rising costs becoming more marked, many companies not benefiting from rearmament and export trade work may have a difficult year in 1951. Consequently it is argued that it is only fair to pay slightly more to shareholders now if this is justified by earnings.

The reported sterling loan to Brazil drew attention to Brazilian rails on hopes that this may help to accelerate payment of take-over money. Leopoldina stocks, especially, came into better demand, because—and this has been pointed out before in these notes—in all cases current market prices are below estimated pay-out values. Leopoldina ordinary changed hands around 9½, the preference was up to 24, the 4 per cent. debentures close on 90, and the 6½ per cent. debentures 131. Leopoldina Terminal debentures at 84½ were also better and the ordinary units were 1s. 4½d. Among other Brazil rails, Great Western of Brazil showed firmness at 153s., and San Paulo 10s. units were 16s. Brazil Rail gold bonds have further strengthened to 43 on the news that meetings are being called to sanction payments to bond and noteholders, but payment dates have yet to be settled. Holders of the bonds will receive a first distribution of 40 per cent., while in respect of the notes there will be a £1 interest payment and a later repayment of £8. This is in accordance with recent market anticipations.

United of Havana 1906 debentures fluctuated, and, after receding, showed a partial rally to 17½. Nitrate Rails held their rise to 71s. 3d., awaiting the annual meeting, and Taltal shares were steady at 16s. Antofagasta ordinary and preference kept at 7 and 42½ respectively, but the recent fall in La Guaira ordinary stock to 80, which came after news of the assassination of the President of Venezuela, has not brought in buyers. Bolivar "C" debentures were 61. In other directions, Canadian Pacifics rose to 36¼, and the preference stock was better at 71¼, with the debentures 98¼. Manila "A" bonds were 72 and the preference shares 7s.

Recent gains in road transport shares were generally well maintained although it is realised that higher costs must be expected to result in lower net profits. In most cases, however, the market believes it will be possible to maintain dividend payments. Southdown have held their rise to 116s. 3d., West Riding were 60s., and Lancashire Transport were 70s. B.E.T. deferred stock was more active and at £495 held most of an earlier rise in response to current market dividend estimates.

Colliery shares remained an active section, buyers again coming in on latest estimates of break-up values, and renewed hopes that compensation payments will be speeded up to some extent. Staveley were up to close on 84s., Powell Duffryn 32s. 3d., and Butterley 44s. 9d. Iron and steel shares held up quite well, but there was scarcely a movement in shares of companies scheduled for nationalisation. United Steel were dull, despite the record results, sentiment being affected by the statement that it has been found impossible to hive-off or segregate any of the assets. Shares of Dorman Long, which is also unable to hive-off assets, were little changed at 32s. 3d., despite the record profits. Owing to the Steel Act provisions companies scheduled for nationalisation cannot raise dividends and the Dorman Long payment is again limited to 8 per cent.

Shares of locomotive builders and engineers again made a firm showing with Gloucester Wagon at 15s. 10½d. "ex" the bonus shares, Charles Roberts were 96s. 3d., Hurst Nelson 58s. 9d., and Wagon Repairs 5s. shares 16s. 3d. Birmingham Wagon were 30s. 9d., Bever Peacock 23s., Vulcan Foundry 24s. 3d., and North British Locomotive 19s. 10½d. T. W. Ward further strengthened to 69s. Vickers were active around 35s. and Cammell Laird 5s. shares close on 10s.

Traffic Table of Overseas and Foreign Railways

	Railway	Miles open	Week ended	Traffics for week: Total this year	Traffics for week: Inc. or dec. compared with 1948/49	No. of weeks	Aggregate traffics to date: Total 1949/50	Aggregate traffics to date: Increase or decrease
South & Central America	Antofagasta	811	12.11.50	£ 84,930	+ £ 5,470	45	£ 2,987,384	+ £ 300
	Costa Rica	281	Sept., 1950	c926,567	+ c49,730	13	c3,345,871	+ c436,566
	Dorada	70	Oct., 1950	37,409	+ 5,561	43	391,233	+ 94,355
	Inter. Ctl. Amer.	794	Sept., 1950	$1,000,438	+ $70,814	39	$10,227,283	+ $696,390
	La Guaira	22¼	Sept., 1950	$63,726	— $39,529	39	$725,535	— $241,943
	Nitrate	382	15.8.50	10,816	— 8,656	32	286,336	+ 6,203
	Paraguay Cent.	274	10.11.50	£227,702	+ £89,492	19	£3,692,424	+ £956,602
	Peru Corp.	1,050	Oct., 1950	$7,759,000	+ $1,731,632	18	$31,206,000	+ $10,689,542
	" (Bolivian Section)	66	Oct., 1950	Bs.12,465,000	+ Bs.1,408,106	18	Bs. 42,974,000	+ Bs.2,027,836
	Salvador	100	Aug., 1950	c88,000	+ c7,000	9	c193,000	+ c20,000
	Taltal	154	Oct., 1950	$1,321,604	— $286,820	18	$5,800,260	+ $1,232,416
Canada	Canadian National†	23,473	Sept., 1950	17,366,000	+ 2,452,000	39	132,187,000	+ 10,339,000
	Canadian Pacific†	17,037	Sept., 1950	12,237,000	+ 1,453,000	39	90,971,000	+ 1,733,000
Various	Barsi Light*	167	Sept., 1950	18,540	+ 652	26	177,870	— 1,515
	Egyptian Delta	607	10.10.50	18,245	+ 1,296	28	319,911	— 24,005
	Gold Coast	536	Sept., 1950	217,274	+ 11,248	27	1,387,568	— 10,950
	Mid. of W. Australia	277	Sept., 1950	38,775	+ 7,000	13	110,856	+ 29,381
	Nigeria	1,900	Jan., 1950	502,360	+ 38,978	44	5,017,814	+ 266,573
	South Africa	13,347	28.10.50	1,699,828	+ 220,483	30	49,849,293	+ 5,064,808
	Victoria	4,744	Aug., 1950	1,886,505	+ 666,194	9	—	—

Receipts are calculated at 1s. 6d. to the rupee

† Calculated at $3 to £1